

# **The American Journal of Pharmaceutical .... Education ....**

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**THE OFFICIAL PUBLICATION OF THE AMERICAN  
ASSOCIATION OF COLLEGES OF PHARMACY**

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"No true science wanes or becomes extinct. Astrology, a pseudo-science, is gone and extinct, but not astronomy. A true science may take on new forms, it hews paths in new directions, but never ceases to blossom and bear fruit. It is ever fertile, ever multiplying and expanding. A single and simple discovery of a scientific fact ushers in many more in its wake, and opens up new avenues for human endeavor and aspiration"—Joseph Rosin.

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**Number 2**

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\*Denotes year institution was admitted to the Association.

# THE AMERICAN JOURNAL

— OF —

## PHARMACEUTICAL EDUCATION

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## Pharmaceutical Sales Training and Professional Relations\*

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The necessity for more intensive sales training of Professional Service Representatives in the pharmaceutical industry is becoming increasingly apparent. That is evidenced by more complex, more highly scientific therapeutic products, increased educational requirements for pharmacists, demands by physicians and pharmacists that representatives be better informed, and the more efficient performances of more highly trained, more scientifically prepared, sales-minded pharmaceutical personnel. You will be required to provide more intensive training to sales personnel with better educational backgrounds because those men with whom your representatives are going to have to compete are going to be better prepared and better trained.

Paul H. Nystrom,<sup>1</sup> authority on marketing, has stated that "the performance of advertising and selling, even in its routine phases, is going to call for an increasing scientific background and scientific training" in the postwar period.

Poorly trained, poorly informed representatives are real liabilities both to their own firms and to the manufacturing pharmaceutical industry. Even today, in this era of considerably higher requirements in pharmaceutical education, we find representatives in the field who have little or no education or training in the sciences such as chemistry, physiology, pharmacology, bacteriology, and anatomy, or in salesmanship, a knowledge of each of which is the everyday working tool of the detailman.

On the other hand there are the men who are exceptionally well trained, who coupled with their innate ability, get in to see the physicians who "don't see detailmen" and who are able to get the kind of active, enthusiastic cooperation from distributors that creates extra business. They are the repre-

\* Speech, illustrated with lantern slides, before the convention of the Canadian Pharmaceutical Manufacturers Association, Montreal, Canada, October 5, 1945.

sentatives who are least apt to contribute to sales personnel turnover.

I have heard it said that it does not matter whether or not a man has good scientific knowledge so long as he can sell. But how is he going to sell effectively if he doesn't know what he is talking about? If a good salesman can be fortified with good scientific knowledge, is it not reasonable to believe that he should have an advantage over a would-be "detailman" in doing a better job of selling and of lending more prestige to his house?

How often, in the company of your representatives, have you heard a busy physician say to you, "I see very few detailmen, but this man I *always* see," and in answer to your "Why?" replies, "Because he really knows what he's talking about!" Next you visit the distributor and see your products well stocked and displayed, the pharmacists' enthusiastic greeting of your representative, the latter following through with a well planned, thorough job of selling ideas, and you come away with ample proof of his effectiveness; and then you see him proceed to the hospital to work the various departments as effectively as before. Such experiences indicate effective training and good selection of men.

What is a detailman? A "detailman" is one who is fortified with good scientific knowledge and the ability to impart it and to use it effectively, and who can do a fully-rounded-out selling job. You have heard men say, "I like detailing but I don't like selling"; or, "He's not a good salesman but he's a topnotch detailman," or "I want a detail job, not a sales job." If that implies that "detailing" is something apart from "selling" it is not my conception of its definition. A good "detailman" can sell virtually anything but an otherwise good salesman may not make a good detailman. Actually, the appellation "detailman" is unfortunate. "Professional Service Representative" or "Professional Service Pharmacist" or just "Pharmacist" more accurately describes his duties. They are the designations by which representatives of some houses are known. These titles are more dignified and carry more prestige. They might well be adopted by the whole industry as titles for well qualified representatives.

By a fully-rounded-out selling job, I mean an integrated selling job, the effective handling of:

1. Physicians, dentists and veterinarians.
2. The retail drug trade and supply houses.
3. Hospitals and all other departments.
4. Wholesalers, or other accounts.

The same underlying principles apply to professional service work that apply to the selling of over-the-counter merchandise. The selling principles are identical, though they are, so far as the physician is concerned, applied somewhat differently.

It is apparent then that the first qualification one must look for in an applicant is that of sales ability. For your answer to that question you must analyze his business experience record. If you prefer to engage "green" men, you may be fairly assured that the prospect has sales ability if he has had managerial experience in a well operated, successful merchandising drug store. If he has a Bachelor of Science or Pharmaceutical Chemist degree from a well recognized college of pharmacy, or even a three-year degree in pharmacy, you can be relatively certain that he will respond well to scientific training.

As a result of his retail sales and managerial experience, he will fully realize what products are made for, that is, to be sold; he will have become accustomed to long hours, and daily report making; he will know how to analyze sales and activities reports; and he will most likely have developed the habit of reading material which pertains to his business to keep himself alert and informed. He will probably not have had time to develop a habit of a continuous round of social activities which would deprive him of most of the time required for reading and studying which are so necessary to keep him up to date and well informed in this business. The chances are that he will be of a serious temperament, the kind who is on the job early and late, and who plans well and operates effectively because he knows the professions' thinking and their problems. He has been in the habit of getting things done. He has been trained to uphold policy and operate in a respectable and businesslike manner. He believes in a truly equitable system of enterprise and competition, free from the chiseling and cutthroat tactics which lead to market demoralization and economic upheaval and waste.

He has been accustomed to assume responsibility and to maintain the pleasant dignity that begets confidence, respect and prestige for himself and his firm. He may well be in his thirties or forties, which maturity is an advantage in gaining confidence and lodging conviction.

I do not mean that men in the twenties, even early twenties, may not do well; quite the contrary. They are only a little less certain. There has been considerable reluctance by many firms to engage men over forty. To assume a prejudice against men of that age is a moral irresponsibility, and a means of passing up splendid talent. Many organizations have wished that young executives in the early depression years, and in fact prior to the 1929 collapse, had possessed the mature judgment and mental stability of men over forty. As the nation, time and medicine progress, greater and greater numbers of our population are saved from premature death. Length of life is progressively increasing. Hence, we must look more and more to the men in their forties for inexperienced as well as experienced sales and detail representatives.

Relatively recent exhaustive studies<sup>2</sup> substantiate the necessity for differentiating between chronological and physiological ages. Osler<sup>3</sup> has quite appropriately said that "a man is as old as his arteries." Chronological age is hardly ever a reliable index to physical stamina and mental acuity. Some men are old at thirty, some are relatively young at sixty, with receptive minds, brilliant intellects, sound bodies, and the ability to function efficiently. If we consider an applicant's physiological or functional age and make use of aptitude tests as a basis of our appraisal, we shall find excellent material which may serve well and long in the employ of the organization. As Mr. Leitzow has pointed out, many companies during the war period engaged "men in the 45-55 age group and discovered that, knowledge and aptitude being satisfactory, well selected men of that age-range are excellent producers and are frequently more industrious, better planners and organizers and carry more 'weight' and prestige."<sup>11</sup> Considering that, in general, the average length of service of representatives may probably not exceed seven years or so, we can well give careful and favorable consideration to men over forty whose physiological or functional ages and whose aptitude test ratings are acceptable, assuming of course that their edu-



cational backgrounds, experience and other characteristics are satisfactory.

Too frequently the reason for an older representative's "slipping," not keeping abreast of things and becoming a "back number," may be laid at the doorstep of poor management. On careful examination, it may be discovered that the sales manager's ebullient leadership is nothing more than empty flag-waving and cheer-leading for the benefit of the Executive Office with the hope that it will lull the latter to sleep or, by misdirection, create an impression that the noise and tommyrot are sales philosophy, logic and learning, but which actually are demoralizing and worthless to the field staff. The executive office may well scrutinize those letters to see what kind of "fuel", and how much, is being "fed" into your sales production "locomotives," lest they start back-firing—silently—and so depreciate the value of good sales training. Of course, not every sales manager can be an R. D. Keim, or a W. L. C. Nichols, but he might well emulate their principles and philosophies as sales executives and as leaders, teachers, and inspirers of men. At best, about a year is required to get a new representative operating fairly satisfactorily and about five years before he really gets to "know the ropes." Bear this fact in mind also in the selection of your Professional Service Manager or Sales Manager, lest you intrust your promotional policy and the whole operating efficiency of your sales and detail staff to one who has neither suitable learning nor the background of experience on which to base his judgment, whether with respect to sales policy, professional sales promotion, remuneration and expense allowances, or the selection, training and handling of men. Is there any good reason why you should not be as critical in the selection of your sales executive as you are in the selection of your personal surgeon, or in fact your representatives, whether or not it involves a relative, a classmate or someone else?

If you have a job of surgery to do, you are not going to call in a bookkeeper. If you have an auditing job to do, you are not going to call in a dentist. Yet that is, comparatively, exactly what has been done in so many instances where a pharmaceutical job, an integrated job of professional promotion is to be done.

Bigelow<sup>4</sup> has concluded that 60 per cent of the men in the selling field do not belong there; that aptitude tests will help to improve the selection and that effective training should do the rest.

There must be a new view on training. The Canadian War Department and the United States War Department have given their fighting men the finest training of any armed forces the world has ever known. If intensive training is good in war, it is good in peace-time industry. Those men who have had that training know the value of intensive training in minutest detail and should expect comparable training for the post-war sales and detail jobs which many of them are going to pursue in the pharmaceutical industry.

Henceforth salesmen, sales managers, production men, and accountants, must think in terms of integrated selling and integrated distribution costs. Selling is a part and parcel of integrated distribution. You may say that your selling costs are high. Probably the fact that they are "high," if they are, has been the reason why you have done such an excellent job of building volume, paying men well for doing a good job for you. Maybe they are high because you have not taught your men to do an integrated selling job, or you have a poor quality of quill who are not lodging conviction, who are not building confidence and prestige for your organization. Prestige, and your representatives' confidence, appearance, enthusiasm, and justifiable pride sell merchandise and let us not forget it!

Your selling cost may be high, Mr. Sales Manager, because your pricing, your "I-can-sell-cheaper-than-the-other-fellow" complex, your planning, your products selection, your promotion scheme is bad. So you take it out on your representatives with lower salaries and smaller expense allowances, and lose your good men and take on poorer ones whereby the vicious cycle continues through poor representation, loss of prestige, still higher integrated distribution costs. "It's not the high cost of selling that hurts—it's the high cost of *not* selling"<sup>5</sup> and that may be due to one or more of several factors including poorly qualified personnel, insufficient sales training, bad sales policy, poor sales management, or a combination of those factors.

How do you know your selling costs are high? By what standard? Actually, they may be low as you may learn if you

will consider your selling cost in relation to integrated distribution cost. How much have your production costs been reduced as a result of effective selling? Subtract that from your so-called selling cost and see what you get.

What I am talking about is aptly stated by Marvin Bower<sup>6</sup> in a discussion of the real danger of a "high distribution cost concept" wherein management action results in *direct* cuts in distribution costs:

"The high distribution cost slogan as a guide to management action has three hidden dangers:

"1. It throws a mental smoke screen around the true *objective* of cost reduction. It not only gets management's eye off the ball; it gets management's eye on the wrong ball.

"2. The slogan may lead to action that is competitively dangerous.

"3. The slogan obscures the fact that distribution costs are an integral part of *total* costs, and hence should not be dealt with separately."

He points out further that increased marketing costs, that is, more and better service, more advertising, and wider distribution, exert upward leverage that drives down manufacturing costs by longer manufacturing runs.

Get good representatives by careful selection and pay them well. That is your moral responsibility in the new order of things, your obligation toward a higher standard of living and increased business volume and prosperity.

You need representatives who can do an integrated selling job, representatives who not only are able to "detail," so-called. You need representatives who can build prestige for your house, who can sell your name, who can sell your advertising, who can sell the merchandisability of your products, who have the resourcefulness and ability to sell your products to any outlet within the scope of your sales policy.

To say that you have a man who is a good "detail" man but not a good salesman, or who is a good salesman but not a good "detail" man is only to say that you have a representative who does not measure up to your requirements, or that you don't know your man, or that you have trained him poorly. Too often, however, the blame is heaped upon the representative when the management is at fault.

A soldier half clad, half shod, poorly trained, is not a good soldier.

To do the kind of a job which should be done your representatives must henceforth know well the chemical, physical and pharmacological facts about your products and the physiology upon which such pharmacological facts are predicated. These, together with a good knowledge of pharmacy in general, are an important part of the selling tools and most certainly of the sales management tools. The representatives must be taught to handle such tools effectively. Professional selling and detailing should be looked upon as a promotional type of selling. Hence, professional service representatives and their managers as well, must be thoroughly trained in the principles of sound selling and merchandising and in the art and ability of doing a complete over-all job of professional products promotion. It costs less to do a job well. Rosman<sup>7</sup> has aptly stated that it is better to train well than to double the sales force.

It is our responsibility as sales executives to prepare the market for our products and especially to prepare the men who sell those markets. Quality and efficacy alone do not sell themselves—they have to be sold intelligently and understandingly.

Another extremely important factor on which to judge a man's desirability, one that is most vital in its bearing on the representative's future success, but yet, one that is almost universally overlooked, is that of interviewing the prospect's wife. She is, after all, the man's confidante; for all practical purposes she is his sales manager.

It is quite necessary from your point of view that she thoroughly understands at the outset everything that the job entails, both the good and the bad. As you well know, there probably isn't any job that is so much of a family proposition as the job of a salesman. The wife is concerned in almost everything the man does, such as his being away from home a week or a month or more; his coming home for dinner at irregular hours; his getting started from home in sufficient time to be on the job at the proper hour—after all, he doesn't punch a clock; his having to spend part of every evening in writing daily reports, in answering correspondence, in keep-

ing his records, and then to spend extra time, Saturday and Sunday included, in reading and study pertaining to his work.

Will the wife put up with it, or will she, day after day, keep him home in the morning as long as he may be encouraged to do so; will she insist that he be home for dinner regularly at 5:30 P. M. sharp; will she discourage him from spending hours in study and in planning because it deprives her of that much companionship; will she discourage him from maintaining his "country" schedule and encourage him instead to spend more time in the home city because the office would not know the difference anyway; is she one who must be "on the go" night after night, to the show, to social functions and what not; is she a nagger; is she a trouble-maker; does she live within her means?

You must find out whether or not she is willing to tolerate the inconveniences and irregularities which are incidental to her husband's sales work. Will she be loyal to the firm; will she encourage her husband, will she be a stabilizing influence in his moments of discouragement or distraction; will she help to keep his thinking straight; will she keep him on the job, realizing that his success is her success or that his failure is her failure; will she take pride in the work he is doing and in his accomplishments? These questions are mighty important from your point of view. If a wife feels that she cannot be entirely happy with her husband in the sales job as you have explained it, or at least be entirely willing to endure its disadvantages indefinitely and uncomplainingly, then you had better not engage the man.

Two or three hours spent in the hotel lounge with the prospect and his wife, directing your whole interview to her, after you have already had a preliminary interview with her husband, will be well rewarded.

Stress particularly all the "bad" things about the job, emphasize that you are not a prognosticator, that you cannot predict the future and thus cannot make any promises for the future. Don't paint any "rosy" pictures. If the wife and the man are then agreeable and you employ him, you are very apt to gain an appreciative, loyal employee, one who because you have been fair and square with him is least apt to go "sour."

It isn't only in selecting sales representatives that candi-



dates' wives are recognized as important factors in a man's success, stability and judgment. William Allen White, the internationally known journalist of Emporia, Kansas, was plagued by political bigwigs when he would not declare himself for a certain presidential candidate. But he stolidly refused until he met the candidate's wife. Glancing at his own wife with glowing pride he said "You don't know a man until you know his wife. She reveals two things: first, his skill as a picker, and, second, by her own character she points the way of his future course.

"If a man ignores his wife, doesn't take her into his counsel and goes ahead like a buck Indian with his squaw trudging behind with the papoose, you've got his number. If on the other hand, he does consult her, you can tell which way he's going to turn. So it's never wise to pick a man for any responsible job until you've taken a good square look at his wife."<sup>8</sup>

The prerequisites to effective training and subsequent effective performance may be summed up as follows. The prospective representative should have:

1. Good appearance.
2. Moderate height and weight.
3. A pleasing personality.
- 3a A good speaking voice and pleasant enunciation.
4. Moderate habits, good health and physical fitness.
5. Alertness, friendliness and a fighting spirit.
6. Integrity, and not be inclined to make exaggerated claims.
7. A good cooperative make-up and the will to follow instructions.
8. A good credit report.
9. A satisfactory financial status.
10. A happy marital status.
11. A cooperative wife who is not opposed to her husband's irregular dinner hours or to his going "on the road."
12. A good educational background in chemistry, physiology, pharmacology, bacteriology and pharmacy, preferably a B. S. degree or better.
13. An inclination to study and to keep abreast of modern pharmaceutical science and service.
14. Good retail experience preferably in a drug store, or pharmacy managerial capacity.
15. Good organizing ability.
16. The ability to make you feel that he is the kind of fellow you would respect and enjoy working for if you were the representative and he the sales manager. (This point is very important.)



It sounds like a big order, but is it? How can such men be had? By getting away from your desk and go looking for them in drug stores. They are available. Don't expand your staff faster than you can acquire such men, even though one might be tempted to "plug those holes" regardless. Experience has shown, I believe, that the best salesmen usually are those who have been "spotted" by a sales executive, possibly with the assistance of a representative.

In the preliminary interview, find out what a prospect remembers about his college subjects. A man whose memory is blank with regard to them very likely has had no interest in keeping up. Should he be hired, the chances are that he will not try to keep up or supplement his knowledge after he has finished his training course, if he does. Written aptitude tests have undoubtedly proven their value and no doubt will, in the near future, be adopted by most of us who have not made the use of them which they merit. However, the aptitude test must not be the sole criterion, although it is, in my opinion, significant. There is no substitute for the sales manager's good judgment in selecting men.

The pharmaceutical manufacturer should consider not only the effect upon his own house of having poorly informed, poorly trained representatives, but should also consider the effect it has upon the whole industry. When I speak of the industry I include the individual retail or professional pharmacist as he is the very foundation of the industry by virtue of his education and training. Unfortunately there are so many poorly trained men trying to serve in the capacity of professional service representatives, men in whom physicians (and pharmacists for that matter) have absolutely no confidence because of lack of pharmaceutical and medical knowledge, that many physicians have closed their doors to all but a few men whose houses they know to have selected and trained them well, or on general principles are making it difficult for anyone to see them because there are too many so-called "detail-men" who have absolutely nothing worthwhile to contribute and whose visits are just a waste of time. Why, only a year or so ago I was told of a pharmaceutical manufacturer whose way of putting men into the field was to accept virtually any man who answered the newspaper advertisement. It wasn't necessary to train such a man, in their opinion at that time,

or even to see him because he worked on commission, so that if he produced, all right, and if not—well, that was his hard luck because no money was invested in him except for some literature and samples and a detail bag. It was then being considered that it probably would be a good idea to give their representatives some training. I should think it would! And I might also add "some selecting!"

The retail branch of the pharmaceutical industry, especially in the last fifteen years, has materially increased its educational, professional and promotional standards. Generally, I believe it can be truly said that the manufacturing division of the industry has not been keeping up with the progress from the point of view of its promotional personnel and promotional policies. There are exceptions, of course, and there are indications that an upswing is on the way in that respect. Pharmaceutical manufacturers should cease to look upon themselves as *the* industry. They are only a part of *the* industry and should work in close cooperation with the rest of *the* industry in employment policies both internally and in the field, in respect to sales policy; and, further, in the support of pharmaceutical associations such as the American Pharmaceutical Association and the various pharmacy colleges. Support your own profession as it has and will continue to support you. You have a moral obligation to do so.

An example of such cooperation is aptly demonstrated by an American firm whose professional relations program consists in part as follows:

1. Substantial yearly cash contribution to the American Pharmaceutical Association for "research or other worthy purpose." (Some other manufacturers contribute liberally.)
2. Advertising in both the Practical Section and the Scientific Section of the Journal of the American Pharmaceutical Association.
3. Membership in the American Pharmaceutical Association for all the firm's representatives.
4. Contribution to the American Foundation for Pharmaceutical Education.
5. Contributions either in cash, or in advertising in State Pharmaceutical Association programs, a definite allotment to each according to the size of the association.
6. Advertising in the N. A. R. D. Journal.
7. A professional relations program publicizing to the physician, via the Journal of the American Medical Association, the

pharmacist's qualifications and the professional service which the well trained pharmacist "qualified by modern pharmaceutical education and professional experience"<sup>9</sup> is able to render.

This campaign is building a tremendous amount of good will for the firm. The pharmacists, especially those giving special attention to the professional side of the business, and pharmaceutical associations, are quite generally expressing their appreciation both in praise of the firm and in active promotional support.

While firms in the past have publicized the pharmacist to the public, this is the first time to my knowledge that a firm has instituted a professional relations campaign which, it seems to me, is most logical. If physicians will rely more upon and consult more with their pharmacists, drugs are bound to be discussed more, hence used and prescribed more.

Strictly professional pharmacies have materially increased in number, which, added to those general merchandise drug stores that are devoting more and more attention to professional business, are wielding greater influence upon and rendering increasingly greater service to the physician.

By "professional pharmacies" I mean those in which the business is limited to the filling of prescriptions and the sale of products for use by the medical profession.

In the Chicago area, thirty years ago, there were, I believe, only three strictly professional stores at most. The last count that I have of the strictly professional stores in that area shows seventy-two, an indication of a corresponding increase in the number of those stores throughout the United States and Canada.

It has been said repeatedly that in the larger cities on the Canadian and American West Coast where collectively professional pharmacies have made their greatest strides, they do about 90 per cent of the professional business in their areas. Increased educational requirements have had a great deal to do with it, in my opinion, as it is not particularly unusual to find Master of Science and Ph. D. degrees among pharmacists, while anything less than a Bachelor of Science degree is rapidly fading out of the picture. Is the pharmaceutical manufacturer not going to keep abreast of that development?

While compounding has been the pharmacists' main function and the justification for his existence, he is rapidly becoming a consultant or consulting pharmacologist. This may be as important to him as compounding. More and more, physicians are depending and relying upon the strictly professional pharmacist for information about and recommendations for the use of drugs and medical specialties. The manufacturer should now recognize that fact and plan to make greater use of the pharmacist in that capacity in planning his promotional program and the execution of it.

As both retail and manufacturing groups are integral parts of the pharmaceutical industry, it behooves them to work closely together for their mutual benefit.

To do so requires mutually consistent policies, and manufacturers' representatives who can talk the language of pharmacists and physicians—representatives who "know what they are talking about." In relation to that, as a matter of my personal opinion, I do not think the pharmacist would have any particular objection to a manufacturer selling physicians direct provided that the physician is so classified in respect to your sales policy such that in case the same sales, at the same physician's price were made through him, the pharmacist or physicians supply house could serve as a distributor at a reasonable professional profit. Fair trade laws, in my opinion, are most desirable and should be enthusiastically supported and enforced.

A thorough course of training should be given every trainee. The training course should be planned in advance and a printed outline distributed to each interested individual. Instructors should be supplied from the following departments of the business:

1. Medical Research.
2. Chemical Research.
3. Biological Research.
4. Products Development.
5. Production Division.
  - (a) Chemical.
  - (b) Pharmaceutical.
  - (c) Biological.
6. Accounting.
7. Credit.

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8. Shipping.
9. General Office Records.
10. Personnel.
11. Librarian.
12. Sales Division.
  - (a) Professional Service Department.
  - (b) Advertising Department.
  - (c) Sales Statistical Department.
  - (d) Sales Office.

A satisfactory course in the average pharmaceutical house might reasonably comprise four to eight weeks or more of intensive study, classroom work and discussion groups. Scientific training should, in my opinion, precede the commercial.

At least a week may profitably be spent in a quick review of the elements of inorganic and organic chemistry, general physiology, pharmacology, anatomy and bacteriology, in addition to an assignment to learn the meaning of a comprehensive list of the prefixes and suffixes as an introduction to medical terminology. The meager knowledge of medical terminology of some so-called detailmen is appalling.

Following the general scientific review, product groups may be studied, first in general, then each individual product specifically, supplemented again by assigned reading and review of training notes for evening study. A course such as I suggest cannot be completed or comprehended in the suggested time if the members of the training class are not pharmaceutically trained college graduates. If they are not, they should not, for the good of the house and the pharmaceutical industry, be in your class.

Care should be taken to stress the disadvantages or dangers of each product as well as its advantages. Competitive products should be studied simultaneously and honestly, as a representative cannot know his own products until he also knows those of competitors. He should be taught the truth and to impart nothing but the truth, supported by authoritative literature.

Written quizzes can advantageously be given once or twice a week. These should be carefully graded and subsequently discussed. They will reflect good or poor instruction as well as aptitude or inaptitude of the trainee.

The first few days of the scientific portion of the course may be devoted to a review of the essentials of various



branches of the pharmaceutical sciences and an introduction to medical terminology. In the case of the latter, an abbreviated list of about one hundred each of prefixes and suffixes may be supplied and which the trainees should be required to memorize. Later a more comprehensive list may be provided. For home study they should be assigned a book on a medical subject, replete with illustrations and charts if possible. This is for the purpose of introducing the trainees to the study of medical literature as well as providing them with the necessary background to the study of your products. You should provide them with a large size medical dictionary at their expense for their permanent use. I prefer Stedman's Medical Dictionary for the beginner because the Greek derivations of the words are translated into the English alphabet, making it much easier for the student to learn and appreciate the words' meanings. They should be supplied also with a full set of your literature and reprints to which you should expect them to devote as much time as possible for the purpose of looking up the meanings of medical words and learning as much medical terminology as possible.

The scientific portion of the training course should be given by the physicians of the Medical Research Division and scientists of the research laboratories. Each physician of the Medical Research Division, should be assigned one or two product groups for discussion, according to the individual physician's special interest, that is, the group or groups of products on which he arranges for clinical research.

The instructor may first discuss thoroughly the body anatomy and physiology concerned in the application of the drug. Next he may consider its chemistry, its standardization and its pharmacological action, being as careful to stress its disadvantages as its advantages. Then may follow the study or discussion of the types of cases or conditions in which the drug has been found effective. These should, when possible, be illustrated by lantern slides or photographs. Also, based on clinical reports, the types of cases wherein the product has not been found effective should be studied.

Again, time should be taken to read several reprints of medical journal articles on the product for the purpose both of gaining a better understanding of its action and use, and of



learning more thoroughly the medical terminology used in the articles. One trainee may read the first paragraph, another the second, and so on. Following the reading of each paragraph the student should be required to analyze each medical term in it, give the meaning of each of the elements from which the word is derived, and finally the meaning of the word itself.

At this point discussion should be had of the authorities who have published on the subject so as to acquaint the new representatives with them. A biographical sketch should be given of each authority so as better to impress the individual upon the students' minds, thus to make more certain that they will not be forgotten when the representatives later have occasion to refer to them in their detail work. At least one house, to my knowledge, has actually brought in recognized authorities in medical practice, even from long distances, to devote a day or half day to lecturing to the training class on the pharmacology and therapeutics of the manufacturer's products pertaining to their respective specialties.

Finally, competitive products should be discussed and fairly appraised as to advantages and disadvantages. No wishful thinking should be permitted to color the discussion.

Interspersed between the instructing physicians' sessions, the scientists of the research laboratories who deal with the products from the point of view of chemistry, bacteriology, physical properties, sterilization, standardization, and laboratory control should discuss those phases of the subject.

Upon completion of the scientific portion of the course, which should include a trip through the laboratories, and lectures by representatives of the several branches of the Production Department, assigned representatives of the Accounting, Credit, Records, Library and Personnel Departments should explain how these departments function and how they and the field staff may be of mutual assistance.

Time should then be set aside to send each trainee out as an observer to spend two or three days with each of three experienced representatives in nearby territories. These representatives should previously have been given special instructions relative to their assignments. They should be thorough-

ly acquainted with the nature and subject matter of the training course. Their objective should be to bridge the gap between the scientific and commercial instruction. By commercial, I mean the actual job of detailing physicians and of selling the trade and hospitals. The representatives should arrange to visit one or more clinics where your products are used so as to give the trainees an opportunity to see cases in which the products are employed and to observe the technic of administration or treatment. They should have an opportunity to observe how the representative operates in the selling process in hospitals and pharmacies.

The instructor-representative should attempt to call objectively on at least one of each class of trade. He should make it a point to discuss (notice that I say discuss), he should make it a point to discuss at least one product of each product group during his visits to physicians; that is, in the two or three day period he should have discussed at least one product in each product group for the benefit of the trainee. He should try to vary the types of specialists on whom he calls.

During the two or three day period the representative should explain to his student as fully as possible the various technics which he employs, and the whys therefor. He should explain his territorial organization, how his day's work is planned in advance, the kind of records he keeps and how they are kept. He should review products with the student and give him any information which may be helpful. The trainee should, I believe, have six to ten days of such field instruction at least two or three days with each of three representatives. Each instructor-representative should submit a detailed report on each student whom he trains so as to help you overcome any apparent weakness that the trainee may present.

You must take care that none of the instructing representatives confuse or demoralize a trainee or warp his thinking by any tendency to depreciate the office training by such expressions as "Well, now I want you to forget that bunch of theoretical stuff you learned at the office and let me really show you how it should be done."

It might be argued that it is best to wait until the didactic training is fully completed before giving the new representative this field training. It might be if additional training and

guidance were not provided immediately upon, or shortly following the neophyte's assignment to territory, and again periodically, let us say, at three or four-month intervals. Subsequent follow-through in the field by the Sales Manager or Professional Service Manager at regular intervals, is as important as the training course itself. In fact, the training course should be looked upon as only the beginning of continuous training.

The last week of the course may best be devoted to commercial training along the following plan:

- I. Organizing a territory on paper.
  1. Selection of most profitable centers according to reasonable plan of coverage.
  2. Preparation of route and directory book for quick reference, with respect to
    - A. Physicians
    - B. Hospitals
    - C. Pharmacies
    - D. Physicians' supply houses
    - E. Wholesalers
    - F. Other Accounts.
  3. Arrangement of physicians' names according to location and to office hours.
  4. Other information as to physicians' specialties, hospital staff memberships, ratings as to commercial worth to us.
  5. Names of receptionists in physicians' offices.
  6. Names of proprietors, buyers, pharmacists, salesmen in commercial outlets and hospitals.
- II. House policy and history.
- III. Clerical work required.
- IV. Organizing the daily work.
- V. Fundamentals of Detailing.
  1. Fundamentals of selling—

<ol style="list-style-type: none"><li>A. The approach</li><li>B. Getting attention</li><li>C. Creating interest</li><li>D. Stimulating desire</li><li>E. Getting action</li><li>F. Closing</li></ol>	}	Continually driving to the point of sale
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(You may help your representative to keep that in mind by using the name of the musical composition "Aida" to recall attention, interest, desire and action. I have had representatives remind me of that several years after I had given it to them, indicating that it does "stick.")

2. Organizing the sales equipment.
  - A. Sample case or detail bag
  - B. Trade list
  - C. Advertising portfolio (an example shown.)
  - D. Clinical notes or photographic portfolio (an example shown.)
  - E. Literature
  - F. Reprints
  - G. Samples
  - H. Preparation of products reminder list
  - I. Preparation of specialists "Products to Detail" list.
3. Organizing the product presentation.
  - A. Referring to the literature
  - B. Names of authorities
  - C. Pertinent statements
  - D. Organizing the material
  - E. How to condense it to utilize it effectively in a three-minute summary or longer
  - F. The technic of presentation.

#### VI. The Operative Procedure.

1. The operative procedure in commercial outlets.
  - A. The approach
    - (a) Direct accounts
    - (b) Non-direct accounts
  - B. Selling the house and its policy
  - C. Imparting information on products
  - D. Taking the stock
  - E. Selling the advertising with the aid of the advertising portfolio
  - F. Building the order
  - G. Getting dealer cooperation (without chiseling).
    - (a) Active sales cooperation
    - (b) Prominent display
    - (c) Utilization of advertising or promotional material
    - (d) Supplying leads
    - (e) Meetings with pharmacists or other sales people  
(And don't forget that the errand boy or stock clerk of today may be the buyer, pharmacist or physician of tomorrow.)
2. The Operative Procedure in Hospitals.
  - A. Contacting the superintendent
  - B. Contacting the pharmacist
  - C. Visiting the various services
    - (a) In-patient Department
    - (b) Out-patient Department
  - D. Follow-up of staff members
  - E. Meeting with hospital formulary committees
  - F. Contacting purchasing departments.
3. The Operative Procedure with Physicians.
  - A. Approach to the receptionist
    - (a) Her importance to you

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- (b) Courtesy
- (c) Introducing yourself
- (d) State your business
- (e) Ask for interview
- (f) Ask for doctor's (1) hours; (2) specialty; (3) hospital connections
- (g) Ask the receptionist's name
- (h) Procedure if interview is not forthcoming.
- B. Making appointments
- C. Waiting versus keeping moving
- D. Deportment and conduct
  - (a) Carry your hat and detail bag in your left hand
  - (b) Introducing yourself
  - (c) Let the physician make the first move to shake hands.
  - (d) State the purpose of your call
  - (e) Remain standing unless requested to be seated
  - (f) Do not place your hat on the desk
  - (g) Select "across-the-corner" position at the desk
  - (h) Keep your detail bag on your knees
  - (i) Don't smoke in the physician's office
  - (j) Give the physician credit for knowing something about your product whether he does or not
  - (k) Do not lecture
  - (l) Do not be dogmatic
  - (m) Thank the physician for the interview
  - (n) Thank the receptionist for arranging the interview
  - (o) Manner of exit
- E. The interview
  - (a) Opening statement of interest, or a question
  - (b) Brief explanation of product
  - (c) Getting physician into discussion
  - (d) How product differs from another in chemical structure or composition
  - (e) Advantages of the product
  - (f) Cautionary statements
  - (g) The "case type" of "detail"—tying in the product with the physician's own cases
  - (h) Reference to authorities
  - (i) Tying in a related product or shifting to a third product
  - (j) Asking for specification, or the order
  - (k) Reference to reminder list of other products
  - (l) The exit.
- VII. Getting distribution.
- VIII. Sales follow up.
- IX. Cooperation with Medical Research Division.
- X. Sales ethics—(I think we all have learned, early in the game, that we cannot get all the business. Demoralization of markets

is an evil for which everyone pays, the contributor in greater measure ultimately.)

- XI. Discussion of real sales situations for continued specification of the order.
- XII. Discussion of work and procedure at Medical Convention Exhibits.
- XIII. Relationships to be maintained with competitors' representatives.
- XIV. General review of the subject matter.

As I mentioned earlier, written tests or quizzes may well be given once or twice a week. I have taken a few of the commercial questions or problems from tests, thinking they may be of interest:

- 1. Name six steps leading to a sale.
- 2. What will be your procedure with a druggist to convince him that he should stock our products and otherwise cooperate with us?
- 3. The physician's receptionist tells you that the doctor is busy today and seldom sees detailmen. What will you do in a case like that?
- 4. State how, in the interview with a physician, you can effectively bring forth your photographic portfolio.
- 5. A physician who should be interested in product X tells you that he can give you only three minutes. Describe fully your interview.
- 6. A pharmacist has not stocked our products and has not previously seen our representative. (1) The pharmacist is receptive. What is your procedure? (2) The pharmacist is an important one but unreceptive. What is your procedure?
- 7. What do we mean by "continually driving to the point of sale?"
- 8. The day is a miserably rainy one. What will you do to make it productive?
- 9. You get a "tip" that the buyer or one or two staff physicians of X Hospital are attempting to have your product replaced by another for routine use in the hospital. What will you do?
- 10. You are told that the hospital pharmacy is not permitted to stock your product because it is not listed in the hospital formulary. What do you do about it?
- 11. You are in a new territory which has not been worked by us before. Explain in detail, with illustrations, how you proceed to organize it on paper.
- 12. Outline your visit to a 300 bed private hospital; to a War Veterans Hospital or Facility; to a bonafide clinic.



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13. One of your wholesalers requests frequent drop shipments to be made. What will you do about it?
14. What do we mean by a (1) "Case type" of detail; (2) A hospital service; (3) An in-patient department; (4) An out-patient department; (5) A house physician; (6) An interne; (7) An internist; (8) An orthopedist; (9) An orthodontist; (10) A geriatrist?
15. You are ready to set up your exhibit at a medical convention. It appears that your booth is not going to arrive. What will you do?

The training course is at best only an introduction or orientation to the ultimate objective, that is, progressive improvement in knowledge and skill, and efficient, productive field operation. Immediately following the training course, or within a week of the representative's assignment to territory, three days to a week should be spent in the field with him. The supervisor may do all the detailing and selling for two or three days to give the trainee further opportunity to observe. The evenings may be used to review the days' work and to give further pointers on territorial organization. Then the trainer may turn the "bag" over to the new representative for a day, coming to his rescue, if necessary, as little as possible. Another day might well be utilized to alternate interviews as a wind-up of the initial training period. Obviously the representative's continued progress and success are dependent in good measure upon proper selection initially and upon the training course itself.

A manufacturer can ill afford not to supply representatives with subscriptions to several medical journals, supply a new medical book once or twice a year, as well as a membership in the Canadian and the American Pharmaceutical Associations. The abstracts in the scientific journal of the American Pharmaceutical Association are of great value to the alert representative. Furthermore, those associations deserve your support. A representative may not read his journals from cover to cover, but he will read enough in the year's time to make the expenditure really worthwhile.

Representatives may well be encouraged to read and study a book on production management dealing with division of labor and time-saving methods to give them a better idea of the importance of most efficient utilization of time, and to make them more conscious of its value. "One of the most

helpful things a salesman may be taught is how to increase his productive time."<sup>7</sup>

Further to assure keeping representatives abreast of the times and on their toes, they should be supplied regularly with informative and inspirational bulletins from the Professional Service Manager. Your representatives should receive abstracts of medical journal articles prepared by the librarian or Medical Research Division but sent out by the Professional Service Manager or Sales Manager. They should be encouraged to attend sectional or local medical meetings to keep abreast of developments in their own areas as well as to become better known to their physicians, to keep their eyes on the possibilities for clinical research and actually to make contacts whereby clinical research may be initiated. The librarian can usually keep the promotional department informed in advance of such meetings, which information can in turn be transmitted to the representatives by bulletin or letter.

The question might arise "At what intervals should men be brought in for re-training?" That is difficult to answer except possibly in the specific instance. The answer would depend upon the breadth of the line, product changes to be made, product additions, changes in the promotional policy, a forthcoming new and intensive promotional campaign and other factors. In any case, I think it a good idea to have men in for retraining at least once in five years. Whether or not they should be brought in at more frequent intervals will depend upon the efficiency of field supervision, the amount of time given them by the physicians of the Medical Research Division during their attendance at conventions, the frequency with which the Professional Service Manager holds sectional meetings, and the effectiveness of the bulletins sent out by him from the home office.

Of course, there is this to consider also, that the men like to get back to the home office occasionally to renew acquaintances, to get a look at the place again, to get a better idea of what goes on at the home office and laboratories, and to really get to know the top executives. There is no doubt that it is good for their morale—it gives them a lift, but I question the necessity for bringing them in for a full course of retraining oftener than once in three to five years. If the field staff is

large it might be well to divide it into groups and have one group come in one year, another group the second, and so on. However, for the purpose of explaining new promotional plans and new products, men should be brought in more frequently, particularly to division headquarters.

It is likewise important obviously to keep the representatives informed about the sales progress in their territories. That is quite customary, of course, but there is one practice not generally used that I have found very effective, and that is to chart the respective sales curves on the Monthly Activities Reports showing a minimum of 6 months and maximum of a year. Such curves are easily visualized and the cumulative trends remembered from month to month. In fact, the impression serves as a daily reminder. Men know that sales are expected to increase in the general trend. Representatives, if they are made of the right stuff, become very sensitive to a drop in their sales curves, more so than with figures, and they usually do not waste any time trying to do something about it without any prodding.

Before I bring this discussion to a close I should like to say a little about keeping representatives' enthusiasm and morals at a high level and getting the most efficient work out of them.

Basically is the application of the Golden Rule. Representatives who are well trained and mature like to be treated as grown ups, for that matter anybody does. Like other normal humans they like considerateness on the part of their superiors and a "pat on the back" occasionally. They need and thrive on encouragement. Probably more frequently than not there is no difference in the innate ability of a representative and his sales manager, the one being a victim of more fortunate circumstances and as a result of which he has been exposed to a greater variety of experiences. I think we should not lose sight of that.

I do not mean that supervision should not be maintained, but that supervision should take the form of help, real help, in planning, study, problems, territorial development and encouragement, not the swinging of the big stick. Give your representatives as much information as possible that may help to prepare them for better things in the future. By so doing

you fortify yourself and your organization with men who are prepared to accept responsibility. The man will take greater interest in his work and in his firm.

Be careful about sales drives, especially on professional products, that you don't overshoot the mark in your enthusiasm to do something big and get your sales force demoralized or "sour." Driving and high pressuring men who are already doing their best, working diligently, consistently and effectively, is not good. Sales drives are desirable periodically provided you do not put on too much "heat", which, if you do, is apt to result in "gypping", deal splitting, commission sharing, special deals that you don't know anything about, peddling, diverting, subdividing and other demoralizing tactics, demoralizing both to the market and to the representative.

Don't send your representatives a lot of stuff taken out of thin air that just isn't practical in the workout. Your men will lose confidence in you and may become disgusted. Use more encouragement and less criticism, "more realism and less tinsel, more accuracy and less staging,"<sup>10</sup> greater practicality and less theorizing.

One time in his selling career a representative kept track of the "extra" hours and "extra" things to do as instructed or requested by his so-called manager who hadn't any sales experience except by occasional observation and who was not basically trained in the business. If a man were to follow carefully and efficiently those instructions, he would have had to put in, at a minimum 36 working hours a day. That was later verified by a firm of efficiency or management engineers. Now that kind of stuff is utterly foolish, aside from being demoralizing. Either the representative becomes disgusted and resigns or one loses complete control of him and he begins to shirk his work besides.

One should above all endeavor to keep the morale of his men at a high level so that they will put in their best efforts day in and day out, have a sales drive of their own 365 days a year.

Now there is another thing that is extremely important in the salesman's life and which affects his efficiency. That is his automobile, and I should like to say a word about that.

There have been a great many statistics provided with respect to the operating costs of automobiles. It would appear that each time such costs are reappraised by the "experts," lower costs are calculated and the representative's expense allowance is squeezed accordingly. And the "standard" automobile for mechanical operating cost efficiency is therewith defined as the light weight car.

Now that is all fine but I call your attention to two things in that connection:

- (1) The human economy has been absolutely ignored in the calculations referred to above. Can you afford to institute a reduction of \$10.00 per month per man in automobile operating costs, because the statistician shows you that, on paper, it is justified, so as to require your representative to use operating equipment which is going to cause him greater fatigue, with its resulting comparative diminution of available energy which expresses itself in less calls, dampened enthusiasm because of fatigue, lessened alertness and efficiency in his sales presentation, diminished pride in his equipment which gives a man buoyance and increased spirit?
- (2) I quote Marvin Bower's<sup>6</sup> warning: "That the oft-repeated slogan—'Distribution costs too much'—is rapidly establishing one of the truly dangerous concepts of our time—dangerous to manufacturers, dangerous to retailers, dangerous to our economy as a whole;" that "the slogan obscures the fact that distribution costs are an integral part of total costs, and hence should not be dealt with separately," and that "distribution costs are closely integrated with other costs, with volume and with profits, hence they cannot be isolated for individual attack."

Let us forget for a moment the physiological and psychological aspects of this "lowest-operating-cost-car" bugaboo and realize that in the pharmaceutical industry the difference of \$10.00 a month of operating a car that will promote greater physical and mental fitness is only three or four calls per month. Suppose a man doesn't increase his number of calls but instead finds himself more physically fit and more mentally alert and enthusiastic during two hundred to three hundred total calls a month. Can you afford *not* to spend \$10.00 more per month for that purpose to enable the man to drive a heavier, more comfortable, less fatiguing automobile? I say you *cannot* afford *not* to do so! How do I know that? You will have to accept my reasons without the benefit of tabulated statistics, but I have made such fatigue studies on representatives and experimentally on myself, over a number of years.



I made a number of identical trips in light weight automobiles and in medium weight cars such as the Packard "6" or "8", the light Buick, Oldsmobile or Chrysler. I found that the wear and tear on the physical economy, the fatigue, was considerably less in driving or riding in the medium weight car compared to the lighter.

When I learned that a representative was contemplating the purchase of a new and heavier automobile, I made it a point either (1) to make a certain trip of several days or a week with him before he bought the heavier car and then the same trip after the purchase of the new one, or (2) to have him make careful observations himself accordingly. These fatigue studies were consistently in favor of the medium weight automobile.

My own data incidentally shows that I could operate a heavier automobile just as economically because of less repairs, practically no lost time from the tie up of the equipment, and no greater depreciation loss because I could drive the automobile farther and longer particularly with a car wherein the lines did not change too much from year to year so that it did not look like an older model so quickly.

I am so thoroughly convinced of the accuracy of my observations and the justification for my conclusions, that I have no hesitancy in advocating your adopting, for sales efficiency reasons, the medium weight automobile as standard equipment for your representatives' use.

In conclusion, it should, in my opinion, be the objective of every pharmaceutical manufacturer to:

(1) Obtain the best talent possible for field work—men who will do sound, intelligent, constructive selling. It is the representative largely by which the firm is judged. It is largely he by whom dealers, physicians and others judge the ethics, principles, business practices, quality of the organization and the sales policy of the firm he represents, and through whom good will between the market and the manufacturer is established. It may appear to cost more but it will not show up as such in the integrated distribution cost picture. Only by selection of such personnel and by such training in the future, in my opinion, will a house gain and maintain the prestige among the medical and pharmaceutical professions, and obtain the specifications and cooperation that will assure its deserved and continued progress.

(2) Give all new sales personnel intensive scientific and operational training so they may know your products thoroughly and may be proper-



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ly indoctrinated with respect to sales policy and your methods of sales promotion.

(3) Weigh carefully (a) the matter of salary to provide ample earnings to representatives to justly compensate them in such manner that they may reasonably provide for their future requirements; and (b) expense allowances to enable them to obtain satisfactory nourishment, rest, and relaxation when away from home so as to maintain good health, mental acuity and high morale.

(4) Maintain a sales policy of live and let live with respect to competitors because there is no one house that is going to get all the business anyway, so what one does get may better be gotten on a profitable competitive basis. Beware of the "chiseling" representative as sooner or later he will harm his organization. Such tactics only lead to market demoralization, lesser profits and lower standards of living.

(5) Recognize basic structures of the whole industry by tangibly supporting pharmaceutical associations and pharmacy colleges, with contributions, and grants for research projects, and by utilizing pharmacists in your promotional endeavors and more pharmaceutical chemists and pharmaceutical engineers in your production operations. By such support you will enable pharmacy colleges to provide more specialized and better qualified material, men who are most adaptable to the work for which you require them, and finally

(6) Support the retail branch of the industry with professional relations campaigns for the purpose of gaining greater respect, prestige and cooperation for the industry as a whole from the medical profession with which pharmacy is so closely allied and dependent upon for its welfare and continued progress.

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## The 1945 Remington Medal Address\*

JOSEPH ROSIN

Mr. Toastmaster, fellow members of the American Pharmaceutical Association, and honored guests: I deeply appreciate the high honor you pay to me by your presence here this evening. To see and meet so many friends at one time is a rare pleasure and inspiration.

Life is as strange as it is real. It is strange, and sometimes wonderful what a part accident, chance, or fate play in our lives and shape our destinies.

A few weeks after graduating, in response to my application, the late Dr. George D. Rosengarten called me in for an interview. After the usual interrogation, rather onesided, including a few embarrassing questions in chemistry, and when I thought the ordeal was over, imagine my mortification when he lifted a book from a nearby shelf, showed it to me and asked me the name of it and whether I knew of this book. I stuttered and stammered, but could not pronounce the name. It was the *Pharmacopœia*!

Who could imagine then that this very book, whose name I could not even pronounce, would play such a role in my life, in my career, that it will make for me most cherished and inestimable friendships and would launch me on the road to this great honor.

From this you will readily see how little I knew of phar-

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\*Read on the occasion of the conferring of the Remington Medal upon the author.

macy, and was not even aware of the existence of the Pharmacopœia.

Fortunately it was not long before fate threw me into contact with the pharmacy luminaries of that time and of all time. First and foremost was Professor Remington himself. I need not speak of his attainments in pharmacy and pharmaceutical education. His name speaks for it. He was also a very humane character. During many of the U. S. P. conferences held in his home library, he would relieve the strain of the deliberations by telling a suitable anecdote, or story, and he had a story for every occasion and nearly every drug. Well do I remember the last time I visited him. He was ill and when I came in he asked me to sit on his bed. After a while the conversation turned to iodides and he said, "Joseph, Syrup of Iron Iodide bothers me. (This preparation was then still at the zenith of its therapeutic reputation.) There is too much sugar in it, and in cold weather it crystallizes. Yet, if the quantity of the sugar is reduced, the syrup is unstable." Then, after a few moments of thinking, he said, "I think you and I should be able to do something about it." In a short time after he died.

George M. Beringer, a pharmacist of the city of Camden, New Jersey, was then a member of the U. S. P. Revision Committee, as well as of the succeeding committee. He was editor of a pharmaceutical journal, and one of the first Remington Medallists (1924). He was also the toxicologist for the city. His learning in pharmaceutic sciences was amazingly wide and profound. To him every blade of grass was an open book, and the chemistry of drugs, no mystery.

Among the great it was my privilege to know and to associate with in the early days of my connection with the Pharmacopœia was Harvey W. Wiley, then chief of the Bureau of Chemistry, Department of Agriculture, Washington, and who also was at that time a member of the Pharmacopœia Revision Committee. Dr. Wiley was a physician who became a leading chemist of his time. To him the nation is forever indebted for the first Federal Food and Drug Act, achieved after years of hard labor and struggle. Through him the Pharmacopœia and the National Formulary were for the first time given recognition by Congress as the law of the land for standards of

quality and purity of drugs. It was an inspiration to sit with him in conference and listen to his discussion. His devotion to the cause of purity and truthfulness in foods and drugs kept him in single blessedness to his late sixties. He then married, had two splendid boys, and lived "by reason of strength" to the ripe old age of four score and five.

From them, and others of like stature, among whom is Professor E. Fullerton Cook, chairman of the Pharmacopœia Revision Committee since 1920, I learned what pharmacy is, its high ideals and aspirations.

Pharmacy is frequently referred to as an art. Good pharmaceutical practice to be sure, does require art and elegance, but basically, pharmacy is a science, encompassing in its scope several branches of human knowledge and experience. From pharmacy was born lusty, aggressive and fast-marching chemistry. The youngest of her offspring, pharmacology, has already won a seat of equality with the older members of the body scientific. Measured by Emerson's dictum that no science *is* a science unless it benefits mankind, pharmacy ranks high among the benefactors of humanity.

There are some who would have us believe that because the pharmacist no longer makes himself his extracts, tinctures, and so-forth, the sun of pharmacy is setting. This is inadmissible. No true science wanes or becomes extinct. Astrology, a pseudo-science, is gone and extinct, but not astronomy. A true science may take on new forms, it hews paths in new directions, but never ceases to blossom and bear fruit. It is ever fertile, ever multiplying and expanding. A single and simple discovery of a scientific fact ushers in many more in its wake, and opens up new avenues for human endeavor and aspiration.

Alexander Flemming's scientific eye spotted a tiny clear patch on a bacteriologic slide. It gave the world the wonder drug penicillin. Following penicillin came streptomycin, a remedial agent of great promise perhaps equal, if not greater, than penicillin. Streptomycin is one of the few substances that are active against gram-negative pathologic bacteria and, so far, the most powerful without pronounced toxic properties. The little clear spot observed by Flemming opened to the hope of mankind the new territory of antibiotics, a territory that

may harbor great possibilities for the healing and relief of the ill and suffering.

Can we desist from speculating about the untold potentialities for a better world the atomic bomb holds, if we but temper its power with the engineering of the human heart?

Scientists are discontented individuals. They are not content with what "is"—with the status quo of things—with what they know and have achieved, and that is what makes them scientists. A group of mycologists, alias "mold hunters" were dissatisfied with the performance of the mold that produces penicillin, so they set out to study and learn more of the intimate life and habits of this mold, and behold! By means of X-ray mutants and other skills they developed a strain that, in the same unit of time, produces many times as much penicillin as before. Think what would happen if human workers should now increase their output to the same degree. Would it be a blessing? I wonder.

There no longer are acres of diamonds to be had for the picking, no wells bursting with oil. Our natural resources of materials are definitely diminishing, but when we recall the many times that scientists have been able to duplicate and even improve upon nature's work, we have no cause to be alarmed. The day may not be distant when knowledge will achieve for us almost complete independence of natural resources. Science creates. It creates both materials and work for thousands and tens-of-thousands. The younger generation may see the time when a nation's wealth will be measured not by the extent of her natural resources, but by the number of her scientists and research laboratories.

The future of mankind rests with science. Recent events have proven it. The military, too, see it. General of the Army, Marshall, puts scientific research as one of the first and most important points for future defense. Unlike cults, cultures, isms and their like, science never fails if assiduously wooed and cultivated.

From the crucibles and test tubes of the laboratories, there will come redemption from many of the nightmares and ills that beset and pursue the human race. In them will be created new materials for man's greater comfort and happiness.

From the laboratories of science may come the answer, if man but wills it, to the prayer of mankind for Peace Everlasting, the fulfillment of the prophet's vision, "When swords will be beaten into plowshares," and "no nation will lift up sword against nation, nor learn war any more."

Science, it may well be, is the power which the poet envisioned in the beautiful verse:

All things by immortal power  
Near and far,  
Hiddenly,  
To each other linked are.  
Thou canst not stir a flower,  
Without troubling of a star.

Pharmacy too, will meet the challenge. Now that peace has returned it will resume its place among the progressive and advancing ranks of science. In the changing scenes of the world the field for scientific pharmacy is rapidly expanding. The program for pharmaceutical education and training should be broadened to meet the new conditions. There is a persistent call for pharmaceutical learning which may properly be called pure scientific pharmacy. Pharmaceutical manufacturing—the practice of pharmacy on a large scale—requires pharmaceutical engineers. Schools of pharmacy should act promptly. For in the words of Auchter,

"In a world making such full use of science, you have to run fast to stay where you are. If you want to move ahead, you have to run still faster."

In any discussion of pharmacy, the Pharmacopœia looms into front view. The Pharmacopœia has been called the "bible" of the pharmacist. Like the Bible which from a small beginning has spread far and wide and became the possession of the world, the pharmacists can no longer claim sole rights to the Pharmacopœia. Its scope has become much greater. The Pharmacopœia is also the bible of the pharmaceutical manufacturer—a vigorous and responsible offspring of the practice of pharmacy, and of state and federal enforcement agencies. It is also becoming more and more a "materia medica" for the physician, and a book of reference for medicinals of recognized merit.

When the Pharmacopœia was first declared by Congress as the standard bearer for drugs, the action was not favored in



some quarters. I venture to say that if the authority of the Pharmacopœia were withdrawn, these very opponents would be the first to petition Congress to reestablish its authority. One can hardly imagine the chaos that would result in the quality and purity of drugs and in pharmaceutical trade if the responsibility of the Pharmacopœia were cancelled.

It was not so long ago that pharmaceutical manufacturers were unwilling to have their new medicinal products in the Pharmacopœia. Now most of the manufacturers are glad to have them in the book, because acceptance of a product by the Pharmacopœia is a mark of recognition of its merit.

Pharmacy and the Pharmacopœia are indissolubly linked. Together they progress to forward the welfare of the nation.

My address would not be complete without acknowledging my indebtedness to Mr. Merck and his associates, Mr. F. Rosengarten, Colonel Perkins and Mr. Kerrigan, for the encouragement and unstinted support of my Pharmacopœia work. Mr. Merck's broad humanitarian vision made possible my contribution to pharmacy.

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## What Pharmacy Should Mean to You as Pharmacy Students\*

HARRY S. HARRISON

President, Maryland Pharmaceutical Association

I am delighted for this opportunity to speak to you about the benefits of our profession while you are still in the pharmacy school. The mere fact that you are here, and that you have done your college work satisfactorily to remain here, is proof that you have a love for the subjects making up the college curriculum. I take it for granted that you have not only been sufficiently interested in the subject matter of the course to learn much about it, but that you have begun to regard it collectively as a means of livelihood.

Let me say, also, at the outset of my address, that in coming to the school of pharmacy of the University of Maryland,

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\* Read before the student body of the School of Pharmacy of the University of Maryland December 12, 1945.

you have chosen wisely indeed. Not only is the school most venerable from the point of age, but it is distinguished for its scholastic excellence. To say that it occupies a position of the highest prestige in the field of pharmaceutical education is merely to state what I am sure you yourselves have long since known.

Dean DuMez, Dr. Cole, Dr. Wolf, Dr. Hartung, not to mention others, enjoy national eminence among pharmaceutical educators. As Executive Secretary of the American Council on Pharmaceutical Education, Dr. DuMez has been most helpful in raising the standards of pharmaceutical education and in strengthening the colleges of pharmacy in every particular. Let me say again that I think you are exceedingly fortunate in being able to obtain your pharmaceutical education under these auspices.

A few moments ago I said that I was glad to see you preparing yourselves for the pharmaceutical profession. Now, let me say that I earnestly hope you will continue in the profession once you obtain your degree. I express this hope simply because I want you to know that at this stage of your career, you are entering into a profession which I have found, after many years, to be both satisfactory and satisfying.

I graduated from this school in 1912, and I think I can say that of the lawyers, physicians, dentists, pharmacists and others I have known, by and large, our pharmacy graduates have done just about as well as those coming from the other professional schools of the university.

I make this assertion to offset the occasional comment, even among pharmacists, that they feel that they might have done better had they undertaken some other professional or business pursuit. In most cases, if they will look around among their friends in the other professions and businesses, they will find that, by comparison, they need not apologize for pharmacy or for the benefits which it offers.

Now, you have a right, I think, to expect me to give you some reasons for the satisfaction which I have derived from my years as a practicing pharmacist. Well, in the first place, I value highly the professional distinction which the term "pharmacist" conveys. I like to have the people of my com-

munity, including the physicians and dentists in my area, look to me for accurate, helpful information with respect to drugs and medicines. The mere fact they come to me for information of this kind shows that they look upon me as a man of some standing in my field and as a pharmacist, really versed in the pharmaceutical aspects of medical practice.

You may occasionally hear some pharmacist complain that the drug store does not stand too well with the public. If you do, don't be too much disturbed about that remark, because in all likelihood he will be expressing a fear born of his own dealings with the public. Without boasting in the least, I think I can say that I know my drug store stands well with the public. I know this from the extent of my professional work and from the countless little things which show that one is well regarded by the people with whom he daily comes in contact.

Now, in making this statement, I am fully aware that it can be made by any pharmacist who takes pride in his professional work and who deals with the community in the same way he would have the community deal with him.

Don't be too much concerned with pharmacy's so-called poor public standing. It stands badly only in those communities in which the pharmacist himself has failed to render that kind of professional and civic service which every enlightened community has the right to expect of him.

Let me urge you, too, not to be too much upset when you hear that someone say that pharmacy's relations with physicians are poor. Here, too, the pharmacist making that statement is most likely confessing that he has failed as a pharmacist to impress himself properly upon the medical men in his neighborhood.

Becoming personal again, let me say that my relations with the physicians in my section of the town are just about as good as they could be. I know them all very well indeed, and they know me equally well. They talk my language, I talk theirs; they trust me, and I trust them. I don't know of anything that could be done either by them or myself which would improve our relations. I make this somewhat detailed reference to the situation to emphasize again that the standing of the pharmacist with physicians is a matter almost exclusively in his hands.

Now, in making this assertion, I do not mean in the least to criticize or minimize the importance of the efforts now being made by our national pharmaceutical associations to bring about improved relations between medicine and pharmacy. These efforts are sound, and if continued, are sure to bring about highly beneficial results.

I am pleased to be a pharmacist also because I know that pharmacy as a profession, plays an essential role in the preservation of health. There is a deep inner satisfaction in seeing people come back to your store after a most serious illness. You somehow feel that you have had a part in restoring them to health.

Of course, the physician is the primary factor. He makes the diagnosis and prescribes the medicine, but his services would be completely nil if there was not a pharmacist to compound and dispense the drugs which he has ordered.

I stress this fact to you, because too many pharmacists seem disposed to place a low estimate on the basic social worth of pharmaceutical practice.

I have always conducted a prescription pharmacy, simply because I like prescription work. It not only keeps me in close contact with the medical profession and my neighborhood, but it makes me constantly aware that what goes on in my prescription department is tremendously helpful to the public which I serve.

Now, the satisfaction which I have expressed to you can be enjoyed by every pharmacist who sees himself and his work in proper perspective. Last year, as shown by competent studies, the pharmacists of Maryland compounded and dispensed about five million prescriptions. Certainly something more than mere numbers is suggested by this statement. I see in it something of great dramatic interest. As prescriptions are written by physicians for persons suffering from disease, this statement means that the people of Maryland came to the drug store more than five million times last year for an essential professional service which only the pharmacist could render.

In other words, the pharmacist performs an indispensably necessary public service. Not only have many pharmacists

failed to sense the indispensable character of their work, but they have foolishly displayed an apologetic attitude to pharmacy in general. Now, let us see if there is any sense in such a distorted frame of mind.

Not only does the pharmacist render an absolutely necessary professional service, but the pharmacist is, when understood, a truly distinguished figure. Of the million or more retail dealers in this country, only the pharmacist is required to possess a university degree. The state demands that he, of all retail dealers, must be superbly trained and educated for his work. The compounding of physicians' prescriptions, and the handling of drugs, medicines and health supplies, is so highly regarded by the state that the state itself prescribes the educational standards to which the pharmacist must conform.

So solicitous is the state for the public safety that, in addition to setting the educational and professional standards which the pharmacist must meet, it also sets up an examining body to determine, in its name, the fitness of everyone seeking to engage in the practice of pharmacy. Surely there is nothing in this picture which calls forth an apologetic attitude. Quite the contrary, there is much in it to make pharmacists proud of their profession as an indispensable factor in the preservation and conservation of public health.

I am very happy indeed to have had this opportunity to talk with you today. While I have made no attempt to make an over-all exploration of pharmacy on this occasion, I have tried to point out to you what pharmacy means to me. I have stressed the satisfactions which pharmacy has given me; I have emphasized some of the distinctions which pharmacists enjoy, and some of the basic compensations which they receive.

Admittedly, I have been very personal in my remarks, but this has seemed to me desirable, as I have been presenting to you a very personal point of view.

In closing, let me again say that I am glad you have undertaken pharmacy as your life work, and hope that you will stay in pharmacy upon your graduation. There are many problems facing our profession, and if they are to be solved, the solution must come from educated pharmacists such as you will be.

There are many improvements which need to be made in the conduct of retail drug stores, and you will be able to make a vast contribution to them. There are many additional safeguards which need to be thrown around the practice of pharmacy, and in the dispensing of drugs and medicines and the education which you are now receiving will be of the utmost value in achieving these ends.

I am glad that there was established, several years ago, a Students' Auxiliary of the Maryland Pharmaceutical Association. The mere existence of this auxiliary is proof that the Association recognizes your significance in the pharmaceutical picture and hopes to enlist your active support in its endeavors in behalf of pharmacy.

You are preparing yourself for a splendid profession, and I know that you will do your part in making the profession all the more worth while.

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## The Need for the Unification of the Medical Field\*

ROBERT L. SWAIN

Editor Drug Topics and Drug Trade News

Ever since I can remember, pharmaceutical leadership has seemed very much concerned over ways and means of bringing pharmacy and medicine closer together. This leadership has indicated that it is dissatisfied with the professional relations existing between the two, and that some constructive program should be developed to sharply improve the situation.

In contrast with this concern, let me say that I have been much impressed with the warm friendships between the physicians and pharmacists in their home areas. Certainly there has been nothing wrong with this phase of their professional relations.

I venture to say that there are many physicians here tonight who value the friendship of many pharmacists here, and

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\* Address before the Niagara Falls Academy of Medicine, March 5, 1946.



doubtless their friendship is warmly reciprocated by pharmacists in the audience.

So, there would seem little reason for us to be too much disturbed over our alleged unsatisfactory relations. If there is anything unsatisfactory in the picture, it must be found in the politics and policies of those at the top, as certainly there is little indication of it at the community or neighborhood level.

The judicial branch of the legal profession has a very happy way of avoiding controversy over matters within the realm of common knowledge. To use the judicial term, courts take judicial notice of those situations known to all. They do not demand proof of that which everyone accepts as being true. Rather, they take judicial notice that the thing is true and proceed to deal with it as though factually established.

I really think that, here tonight, we ourselves may take judicial notice of the fact that pharmacy and medicine are getting along quite well together. And, in connection with this happy occasion, I recall a statement once made by Dr. Robert H. Riley, the distinguished director of the Maryland State Department of Health. It was to this effect: "There can be no satisfactory medical practice without a supporting pharmaceutical practice, and there can be no satisfactory pharmaceutical practice without a supporting medical practice."

I think this statement is absolutely true. Pharmacy, as a profession, whether it be practiced in the neighborhood pharmacy or in our magnificent manufacturing pharmaceutical laboratories, is indispensably necessary to the medical profession and to public health generally. Just so long as the physician must resort to drugs, medicines and medical supplies in the treatment of disease, just so long will pharmacy play an essential part in medical practice.

Giving the thought a little different twist, it can be said that just so long as physicians resort to drugs, medicines and health supplies in the treatment of disease, just so long will medicine be essential to pharmaceutical practice.

The physician knows that he cannot get along without the services of the pharmacist. The prescription department is

the physician's right arm, so essential is its part in the fight against disease. The physician is dependent upon the penicillin, hormones, sulfonamides, biologicals, chemicals, pharmaceuticals, found in the corner pharmacy and drug store. It is his armamentarium, his dependable standby.

In their relations on their home grounds, neither physician nor pharmacist is much disturbed over whether their professional contacts are good or bad. They have, most likely, never taken time to formalize the matter. In fact, the subject has probably never been given the least consideration. They take each other for granted, deal with each other on the most friendly basis, and between them, do a thoroughly commendable job.

So, I think we can, with complete justice to each other, and with due regard to the public welfare, take judicial notice of the fact that pharmacy and medicine are complementary and supplementary in their relationships.

But, while we here may well take judicial notice of the situation, this is not to say that medicine has utilized to the fullest extent the public significance of the drug store in combating some of the problems which today are casting such an ominous shadow over the whole range of medical practice.

Let us, therefore, spend a few moments in trying to rationalize the drug store in terms of its public significance. In the first place, the public must come to the drug store or pharmacy for a service absolutely vital to the health and well being of the community. This is illustrated by the fact that in 1944, over 265 million physicians' prescriptions were compounded and dispensed in the drug stores of the country.

Certainly, so far as the public is concerned, more than mere figures are involved here. It means that for more than 265 million times, the sick and ailing amongst us called upon the pharmacist for a highly specialized professional service which only he could render. This in itself gives to the neighborhood pharmacy a distinctive place in public estimation.

In addition, the pharmacy is the source of drugs, medicines, health supplies, first aid requisites, and a host of sundry preparations having some direct relationship to health needs.

One reason the pharmacy occupies such a strategic place in public estimation is that it is frequented by so many people every day. Careful studies have shown that more than 20 million people daily enter the nation's drug stores. This means a total of 600 million per month or 7,200,000,000 per year.

The force of these impacts upon public opinion are utterly beyond evaluation. At any rate, some time ago, the Commonwealth Fund, in a study of pharmaceutical practice, made the assertion that the pharmacist was the best single individual for the dissemination of public health information.

It is in this connection that I would urge us to view the neighborhood pharmacy at this moment, because if the pharmacist is the best single individual for the dissemination of public health information, his services might be equally useful in disseminating other information of public interest and significance.

Now, this brings me to suggest that pharmacy and medicine should work more closely together at the policy-making level, if they are to make the most effective use of their professional positions at the neighborhood level. This thought, too, has gained some headway among medical men themselves.

A short while ago, the presidents of 25 state medical societies in the Middle West adopted a resolution calling for a National Health Congress, to be representative of the medical, dental, hospital, nursing, pharmaceutical and allied professions, for the primary purpose of waging a campaign against current socialistic schemes for taking over the medical professions.

I was particularly pleased with this development, as it was quite in line with a view which I myself had expressed some time before. Let me quote briefly if you will, from the Commencement Day address which I was privileged to give at the University of Tennessee in June, 1943, in which I recommended that a National Health Advisory Council be set up:

"I believe a careful survey of the whole field of health practice will show that conditions would be generally improved by an intelligent integration of each of the health professions represented here this evening into a more tolerant, a more broad, and with it all a more constructive health program.

"It is considerations such as these which have led me to feel that some such body as a National Health Advisory Council might serve a useful and beneficial purpose. Such an agency, made up of medicine, dentistry, nursing, pharmacy, and perhaps a few others, could provide a testing ground for national policy, and might well bring about the very kind of interprofessional relations which seem so urgently needed.

"Such an advisory council might be compared on the one hand to a mutual assistance pact, and, on the other hand, to a clearing-house for thoughts, plans and ideas designed to better health relations throughout the country. ,

"A National Health Advisory Council, properly constituted, would seem an ideal agency for harmonizing opinions and formulating policy in such matters as legislation, public relations, and in suggesting objectives which were mutually desired. I might say that it was the combined work of medicine, dentistry, pharmacy and nursing, functioning as a unit, which was successful in the enactment of the basic science laws in many states. We might as well be practical and admit that in unity there is strength, and that united we stand, and divided we have a good chance to fall."

As I see it, the time has come to strive for a unification of the medical professions, as such a unification seems to me at least to give the best promise of affording a successful defense against those forces which would make medical practice a governmental function.

But, some of you may ask, "Would such a unification of medical interests prove effective?" In answer, let me say that it is already proving effective in many ways.

Let's consider the mechanism by means of which the United States Pharmacopœia is revised. The revision committee consists of fifty persons, seventeen of whom are from the medical profession. These seventeen, plus five from the pharmacy group, constitute the Committee on Scope. The medical members of this committee, however, have complete authority over admission and deletion of therapeutic products, the pharmacy members having complete authority over the admission and deletion of products of pharmaceutical necessity.

That this cooperation between pharmacy and medicine has been most successful is testified to by the Pharmacopœia itself. The U. S. P. is the peer of pharmacopœias the world over, simply because it represents the composite judgment and the combined efforts of the medical and pharmaceutical professions.

Some time ago, the American Social Hygiene Association, in its efforts to combat the spread of venereal disease, called upon the American Pharmaceutical Association to join hands with it in an effort to bring pharmacists into the very center of the venereal disease program. Recognizing the vast contacts of pharmacy with the public, arrangements were made whereby booklets and leaflets dealing with the serious consequences of venereal disease were distributed by thousands and thousands of retail drug stores.

The pharmacist, too, was made the subject of an educational approach. Surveys had shown that 60% of persons infected with venereal disease first consulted the pharmacist in their need. Pharmacists were urged not to attempt any treatment of these cases, but to refer them to venereal disease clinics or to other competent medical sources. ,

As a result of the cooperation between pharmacy and medicine in the American Social Hygiene Association, pharmaceutical practice in the venereal disease field has vastly improved. Surveys recently made have indicated that the proportion of pharmacists attempting to treat venereal disease, has sharply declined.

Another evidence of the value of the cooperation of pharmacy and medicine at the policy-making level is the fact that pharmacists now serve as members of twenty state boards of health, and in some states they are, by law, made members of county and local health boards.

I believe you will find that in most of these instances, the pharmacist has been able to make a worth-while contribution to public health administration. The value of this cooperation is also shown in the enactment of the basic science laws of many of the states, and in the success which has been met with in beating down legislative proposals to prevent animal experimentation in medical and allied research fields. Here the pharmaceutical point of view has been most effective.



Now, one reason why there has not always been the right degree of cooperation between pharmacy and medicine at the policy making levels is that medical men, by and large, are not as familiar as they should be with the basic merits of modern pharmaceutical education. Not knowing the scientific and professional qualifications of the pharmacist, his advice and counsel have largely been ignored when policy matters affecting the medical care field have been under consideration.

Obviously, the medical profession must know what the pharmacist is qualified to do before asking him to do it. Fuller utilization of the pharmacist's professional knowledge and skill would, I believe, be advantageous not only to medicine, but also in working toward a solution of some of the more serious problems which now confront the medical care field.

I frequently run into physicians who quite honestly admit that they have little or no concept of the modern pharmacy curriculum and I venture to assert that if we were to call at random any ten of the medical men here and ask them to give a reasonably detailed account of the content and scope of the pharmacist's training, they might be hard put to handle the assignment satisfactorily.

Now, this is no criticism of the medical profession, but rather, a confession that we as pharmacists have not done a very good job in selling modern pharmaceutical education to the medical profession.

In fact, in some of my recent writings, I have suggested that the National Association of Boards of Pharmacy, and the American Association of Colleges of Pharmacy might well consider the feasibility of preparing a brochure setting forth the basic merits of pharmaceutical education for the benefit of the medical profession, as I am convinced that the need exists for closer cooperation between pharmacy and medicine at the policy making level.

I hope to see every barricade to this cooperation eradicated. However, as a contribution to this phase of the problem, let me say that the modern pharmacy curriculum covers four college years, and in addition to what might be called cultural and educational subjects, includes standard work in the theory and practice of pharmacy, organic and inorganic chemistry,



biochemistry, bacteriology, physiology, pharmacology and other professional and scientific subjects underlying the production and standardization of drugs and medicines. Not only are these subjects included in the course, but each of them must conform to sound standards of professional education.

There are 67 colleges of pharmacy in the United States on the accreditation list of the American Council on Pharmaceutical Education. All in all, I think it can be said that pharmaceutical education is on a sound educational basis and will compare favorably with any other field in professional education.

Now, let's consider the threat which overhangs the medical care groups, with special reference to the Wagner-Murray-Dingell Bill and its implications. We need not be too much concerned with the Wagner-Murray-Dingell Bill as written, but we do need to be much concerned with the Wagner-Murray-Dingell Bill as a symbol of the times.

We need to consider this highly significant matter not only as it bears upon the fortunes of medicine, but also as it bears upon pharmacy, dentistry, hospitals, nursing, the manufacturing pharmaceutical industry, as each of these is vitally concerned. And, we need to ask, would we not be in more strategic position if, through a unification of all medical interests, we were able to throw into the fray the full strength and resources of the different groups?

Not only was President Truman's endorsement of compulsory health insurance politically wise, but it rests upon sound considerations of public policy insofar as the insurance phase is concerned.

While Mr. Truman did permit himself to be used by the radical element of his party, he was undoubtedly aware that there is a deep-seated demand upon the part of the public for ways and means of meeting the costs of illness on a prepayment basis.

And, I think it can be said that his discussion of the whole subject has stimulated greater public interest in this matter. The cost of illness, even on the part of those who are able to pay, has an important bearing upon the costs of living. People want, in fact, they demand, some prepayment method of coping with the costs of illness.

So, the problem is no longer whether some prepayment plan is to be made available, but rather, which of two strongly antagonistic ideologies is to be permitted to determine the pattern. Is the plan to be operated by the government, and financed by federal funds, or is it to be operated by the medical professions with the government participating in a supplementary manner, as the facts may justify?

It is likely that the people as a whole have not actually faced up to the implications of these questions, but they do know that insurance has worked well in other areas of human interest, and they know it can be made to work equally well in the field of medical care.

But, while the people as a whole have probably not decided whether they want a prepayment means of meeting the costs of illness, operated by the government and made compulsory by law, or whether they want the alternative offered by the medical professions, sooner or later they will make up their minds with respect to this vital point. In fact, it may well be that the majority of people are lined up with Mr. Truman's proposals at this very moment.

Before his address was delivered, nation-wide surveys had shown that while the majority of people were strongly in favor of some prepayment plan, the majority were opposed to having the plan conducted as a governmental function. So far as I know, there has been no nation-wide survey since the president's address. However, scattered surveys seem to indicate that the president's proposal may have won the majority.

Recently, the *Washington Post*, by a poll of residents of the District of Columbia, found that 70% were in favor of Mr. Truman's compulsory health insurance program. On the other hand, a contemporary Iowa poll by the *Des Moines Register*, showed that 40% were lined up with the president, 49% against him, with 11% expressing no opinion.

A very recent survey conducted at the request of the New York State Commission on Medical Care, has shown that 86% of the people want some form of medical care insurance and that 51% favored turning this matter over to the federal government. So, I should say that, right at the present time, per-

haps the people are still open-minded with respect to this basic phase of the matter.

But, as I have remarked above, they are not likely to be open-minded for long. All of this seems to me to add up to the need of an educational program on our part to make the public see the long range benefits for continuing medical care under private auspices. I say an educational program is required, because those favorable to the Wagner-Murray-Dingell philosophy are constantly bombarding the public with the merits of their cause.

Their cause is sponsored by the president, by important segments of Congress, by organized labor, and by many other civic and ideologically minded groups. It would seem reasonable to presume that this constant courting of public opinion will swing a majority of the people over to the Wagner-Murray-Dingell side of the fence, unless counteracted soon.

Now, this educational program would be tremendously expensive, difficult to organize and difficult to maintain and carry on. It would have to be well conceived, intelligently conducted, and predicated upon factual information rather than propaganda.

It would, of course, be foolish to dogmatically assert that everything is well in the field of medical care. We know that everything is not well in this field, and it would be most short-sighted indeed to insist that it is. There are sections of the country where adequate medical care seems impossible of attainment, except under governmental sponsorship.

There is a vast need for the extension of hospital facilities, and it is difficult to see how these could be financed, certainly in many sections of the country, without governmental aid and cooperation.

There are doubtless some millions of our people who, of themselves, are unable to meet the costs of adequate medical care. Certainly some provision should be made for these. So long as there are segments of the people, or sections of the country denied proper medical attention, just so long will this constitute a challenge to the sufficiency of our medical care facilities. And, unless we accept this challenge, we invite the radical forces to come in and assume the functions which are

not only rightfully ours, but which we show by our conduct we are able to properly perform.

My point is that our educational effort must be factual, and must make an honest evaluation both of the excellence and defects in our system of medical care, and be equally forthright in the solutions which it offers.

While the people themselves do not know just what part the government should play in medical care, they are convinced that when the facts are all in, it will be found necessary for it to play an important hand.

I have no doubt that an educational effort, based upon an honest facing of the issues, would command public support and put to rout those who, for political or ideological purposes, are determined to have the government take over the medical professions.

I believe, too, than an honest educational effort would sell the voluntary health and hospital insurance program of the American Medical Association to the people. While it is not yet perfect, the plan does have most impressive medical sponsorship and is bound to impress the thoughtful person as an earnest attempt to meet the situation.

Our purpose should be to drive home to the people the basic merit of the proposal that medical matters are best entrusted to medical men. They must be taught to place their confidence in those various hospital and health insurance programs which have been investigated and found worthy of medical approval.

The issue is one between governmental lordship over the medical care field and the medical profession operating within the orbit of private enterprise. The people, in the long run, must decide between medicine under federal bureaucracy and medicine under individual, professional initiative. To win their endorsement, we must develop a constructive program which is factually supported and honestly and fairly presented.

Now, in this educational program I think the pharmacist has a real part to play both at the policy and neighborhood levels. Certainly his training gives him an understanding of medical care needs, and his vast contacts with the public give

him the opportunities for bringing these needs home to the people themselves.

The relationship of the drug store to the public cannot be over-valued. Let me again state that with twenty million or more people coming to drug stores every day, the opportunities of the pharmacist for dissemination of information with respect to the attempts now being made to socialize the medical professions are absolutely without limit.

I believe that serious thought should be given not only to ways and means of conducting an educational program, but that we should be equally astute in bringing about a unification of all the public health professions as well. The problems confronting us are of the most urgent character. They may literally encompass our ability to survive the ideological pressures of the day. Never have the issues been more clearly seen, never have their implications been more doleful.

We need to pool our resources, coordinate our talents, so that our full force and power may be used to checkmate those who would make the government supreme in the fields of professional practice. There are those at work who are determined to bring this about as a matter of national concern. They are well organized, zealous, and whether we like it or not, seem to be moving in harmony with the current tides of economic and political philosophy.

But, the teachings of history are on our side. Tradition, too, urges us to fight on to victory. This nation stands erect today simply because it learned long ago that in union there is strength, and that nothing can prevail against its resolute will.

We, too, must be big enough, intelligent enough, determined and devoted enough to implement this same basic truth into our thinking, our planning, our policy and our action, if we are to survive the radical erosion of the times.

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As we go to press, comes shocking news of the passing in the late afternoon of April 23, of the beloved Dean J. Grover Beard of the University of North Carolina. His friends, numbered by the thousands extend to his family their sympathies and again we find comfort in the significance of the events of the first Easter morning twenty centuries ago.

## The Challenge of Pharmaceutical Industry to Pharmaceutical Education

DONALD C. BRODIE

University of Kansas, School of Pharmacy

The pharmaceutical industry last year spent between three and four per cent of sales for scientific research and apparently is spending more for such research than any other major industry when calculated in percentage of sales, Charles Wesley Dunn, general counsel of the American Pharmaceutical Manufacturers Association recently reported. He also stated that the drug industry as a whole is spending more in dollars for scientific research than the three major public agencies for medical research.

Just what significance do these statements have to those of us engaged in pharmaceutical education? Industry has issued a bold challenge, one which cannot be ignored if the schools of pharmacy are to continue to make adequate contributions to industrial pharmacy through a well-coordinated scientific program of training and research.

The obligations of the schools of pharmacy are not confined to a single isolated field although the training of men for retail pharmacy is admittedly our first responsibility. No group in the modern university can confine its interests and energies to a few selected areas when there is an evident need for service to other areas of interest. The need of well-trained personnel to staff the various schools of pharmacy has been adequately demonstrated. (1) The pharmaceutical industry is now asserting its present and anticipated needs by commanding a place of leadership in scientific research among the major industries. The needs in each of these cases are clear-cut and well-defined: each case requires personnel with advanced study and training in pharmaceutical technology and research. How are the schools of pharmacy going to dispatch these recognized responsibilities calling for emphasized programs in graduate study and research?

The President's Page of this journal during the past year (2, 3) has repeatedly emphasized the need for graduate study as a part of our general program in pharmaceutical education.



The president has called attention to the existing conditions and has pointed out the inadequacies of poorly equipped laboratories understaffed and poorly staffed schools, and inequitable teaching loads, as contributing factors to the present status of pharmaceutical education with regard to graduate study. Suggestions have been made to remedy the existing conditions, and proposals have been made to provide greater flexibility in the undergraduate curriculum whereby better correlation is possible between the undergraduate and graduate levels of study. In addition, a Committee on Graduate Study in Pharmacy has been proposed (4) as one of the standing committees in the American Association of Colleges of Pharmacy.

The schools of pharmacy have not had an easy lot during the war years, but other educational groups have had similar plights. Problems of enrollment, staff vacancies, lack of graduate personnel, overworked staffs, and innumerable other factors have contributed to a gradual decline in pharmaceutical research in our educational institutions. This is particularly evident from the number of scientific papers published in the *Journal of the American Pharmaceutical Association* (Scientific Section, Scientific Edition) during the 1935-1945 interval. (5) Of the total number of papers published in the *Journal* each year, pharmaceutical schools contributed from 55 per cent (1937) to 36 per cent (1945), with an average yearly contribution of 49 per cent of the total. During this same period industrial laboratories were contributing from 28 (1939) to 55 per cent (1945) of the total number of papers, the average yearly publications amounting to 39 per cent of the total. Thus, contributions to our chief scientific publication from schools of pharmacy reached a new low in 1945 while industrial laboratories were attaining the other extreme. This in itself is neither surprising nor unaccountable. It represents an invariable accompaniment to the economic and social unrest of the war years. However, behind this trend lies a basic contributing factor the effect of which was not particularly noticeable during the war but which will show its full significance in the period immediately ahead. This factor was a lack of vision and foresight on the part of many of our administrators and teachers in pharmaceutical education relative to the coming need for men and women with advanced training in pharmacy. Have we been unaware of a

period of transition which was introducing new and demanding opportunities in pharmaceutical education? The opportunities of the present day and of the period just ahead did not come to us over night. The increased tempo of research in industry, among foundation groups, and in university laboratories, has been well defined and easy to follow. We have known that many of the pharmaceutical research groups in industry were planning postwar programs of expansion amounting to increases as high as 20 to 30 per cent in personnel, expenditure, facilities, etc.

Fortunately, a few of our schools of pharmacy have carefully followed the trend of the war period and have planned and put into operation programs which will increase the emphasis on graduate training and research. Upon these few schools will rest the responsibility for training men and women in the skills and techniques pertinent to pharmaceutical research and technology. From them will come replacements for our instructional staffs. Industrial laboratories will look to them for competent personnel to man their control, developmental, and research laboratories. Upon these few schools will rest a responsibility which should be shared to a greater extent by pharmaceutical education in general. We can only hope that this same responsibility which these schools have foreseen will provide the nucleus for an increasing interest in the development of adequate graduate and research programs among our schools of pharmacy.

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In an editorial appearing recently in the *Journal of the American Pharmaceutical Association*, Mr. Leo F. Godley, representing the American Society of Hospital Pharmacists calls attention to the fact that pharmacy graduates interested in hospital pharmacy as a career should build soundly for it by taking a pharmacy internship in a well-operated hospital. Such an internship should include comprehensive instruction and practice in prescription preparation, bulk manufacturing, sterile solution and ampul manufacturing, purchasing, research, professional poise and administration. It has been proposed that the society place their stamp of approval upon hospitals for pharmacy internship and that hospital internship be a requirement for positions as hospital pharmacists. This proposal has a good chance of being approved.

## Pre-Columbian Healers of Latin America\*

GEORGIANNA SIMMONS GITTINGER

School of Pharmacy, University of Maryland

When explorers and colonists made treaties with the Indians in any of the Americas, the Chief or Cacique was the man with whom they dealt, but he was seldom the absolute arbiter. There was always a council, and an authoritative voice in that council was that of the Medicine Man. Sorcerer, wizard, astronomer, in addition to being the custodian of all the lore of healing, his was the prejudice which decided for or against the European.

Pre-Columbian South American medicine like all primitive cults was preeminently magic in character. The medicine man used incantations and dances; sometimes he sucked out poisons or beat them out of the patient. His mystic powers gave him a sacerdotal quality, and the drugs he used received their healing powers by invocation of the gods. There were regular hierarchies of sorcerers and witches who also pontificated at death and interment, usually with much drunkenness.

The healers, called Camascca, Machi, Shaman, applied ointments, and massage. Special rooms were purified by spraying with cornmeal and water. Then while the patient was hypnotized into a deep sleep, the healer pretended to open the abdomen and remove snakes, toads and other demonic animals which were cast into the fire, thus purifying the man of his infirmity. This hypnosis was often of real use as psychotherapy.

Special plants were associated with definite cultures, such as chocolate in Mexico and coca in Peru. The Aztecs knew the curative value of salt and vapor baths and left extensive records of the uses of specifics. Jalap was known early as a drastic purgative, and chenopodium, cacao and tobacco were used as astringents. The *Schinus Molle* was called by the Incas the tree of life because of its many uses. Dropsy, gout and edema were relieved by baths made from infusions of its leaves and bark, with salt added. Sweet chicha made from its

\*This paper, as well as others previously and to be published, is a translation and commentary by Miss Gittinger which gives us an insight from time to time into the ancient and current medicine and pharmacy of Latin America.—Editor.

ripe fruits was also used in cases of dropsy. This is quite distinct from the chicha brewed from fermented corn. The white fragrant resin of Molle was reported excellent for mending fractures and sprains and for cleaning and healing ulcers. From the ashes of the tree there was derived a fixed alkali used to purify sugars and set dyes.

Another plant of divers uses, the *Agave Americana*, called the Pita in Peru and Maguey in Mexico, provided wine, vinegar, oil, syrup, honey, needles, thread and ropes; while its thick stems, impervious to insects made house timbers and corral fences.

Cascarilla of Loja, *Cinchona Calisaya*, was known as a febrifuge, *Coca Inca* as a narcotic, and *Cacao* as an astringent and diuretic. Lemon, a diaphoretic and counterirritant was used as a disinfectant in the eyes of the newborn; and tomato thought by mid-Victorians to be poisonous, was used by pre-Conquest healers for infantile gastroenteritis. Tobacco leaves were used as an antiphlogistic and the infusion served as an insecticide. Vanilla was a stimulant and smoking the leaves of *Datura Stramonium* relieved asthma.

In Peru there were magic practices, but with no written records the herbalists gave information verbally father to son. The Inca's physicians had acquired their plant lore from the Quechua Indians. This was solely for the Inca and nobles. The common people gleaned what they knew from experience.

Medicine and surgery of the Inca Empire have been glorified by reflection of medical progress brought by the invading Spaniards. Spain at that time, in Salamanca, Valladolid and Alcalá de Henares was at the peak of medical and surgical progress developed from the practices of the expelled Moors and from the exigencies of almost continuous wars.

Much emphasis has been placed on the practice of trephining as exhibited by numerous skulls of the native Indians. But the medicine of the Inca Empire was no better than the rest of that civilization, being equally primitive by current European standards, and similar to that of the Aztecs. Both had human sacrifices in which the victim was disembowelled, but they seem to have learned nothing of ventral anatomy or physiology from this.

They had funeral rites, feasts of purification, fasts and processions to scatter demons, which were lead by priests, magicians, witches or healers. There were also dwarfs, hunchbacks and other deformed creatures to amuse the monarchs. The blind and lame were supported by public charity with no attempt at cure.

Garcilaso, who should know better than any other chronicler, makes no claim for unusual superiority of medical or surgical practice of his native antecedents, other than that they had developed the usual knowledge of the curative values of many indigenous plants.

From ceramics, folklore, bones and mummies one obtains more precise knowledge than from the chronicles, which are biased for or against the cultural evolution of the race. It must be remembered that written Quechua and Aymará are post-Conquest evolutions and may have absorbed Spanish elements.

The Indians left their best records in their pottery. Since the huacos, the round water jars, lend themselves to human or animal form, these picture the life around the artisan. Animal forms might commemorate a pet domesticated creature, but more frequently the animal portrayed is a demon or evil spirit to be appeased.

Of the humans, sometimes the whole body is represented, more often just the head. There is an extensive collection of ancient huacos showing pathological and psychological conditions, even to the facial expression. Edema, paralysis of one side, acromegaly, conjunctivitis, facial tumors and blindness are pictured.

There are mutilations, cuts, injuries to lips, nose and feet, such as amputations. Some display fine tattooing on cheeks and nose. Harelip, siamese twins, pregnancy and several stages of labor and delivery are very graphically modelled. Diagnoses of syphilis, leprosy or tuberculosis from these faces and bodies are doubtful, and have lent themselves to many conflicting reports.

Folklore may lead into varied reconstructions of aboriginal customs. The Indio himself cannot or will not say why he follows certain practices. Much of the current survival is al-



tered by the religion imposed by the conquerors, except in some very isolated districts. Folklore is a dynamic fount of information, altering with the changing mentality of a primitive people. Whereas the ceramics are a static record of infirmities and customs.

The Araucanos of Chile had a magic more dramatic than any of these other civilizations. Theirs was connected with tree worship, specifically the Canelo, *Drimys Winteri* and *D. Acris*. The odor and taste of the wood, leaves and bark is extremely pungent; the smoke of its wood, irritant to the eyes, was used as a fumigant. The bark and leaves preserved clothing from moths, and bathing in an infusion of Canelo bark relieved nerve disorders and skin affections. If wild doves ate the berries their meat was made tough and disagreeable to the taste. The tree still provides lumber for building, is used as a stimulant and antiscorbutic.

With all these properties the tree was a focal point and native councils were held in its shade. For such a ceremony the people knelt about the tree while the Machi or soothsayer climbed it and invoked the god Pillan in the directions of the four winds by throwing little sticks toward each point of the compass. After an oration he answered questions as an oracle. Speaking as the voice of Pillan, the Machi had a tremendous power to destroy his personal enemies.

Descending the tree after this ceremony he led a march around the Canelo timing it with a small drum. Chicha was imbibed freely and frequently the meeting ended in tumult with killings and even warfare.

In time of mortal sickness the Machi would lead the relatives and friends to the house of illness, everyone carrying branches of Canelo. The ceremony began with beating drums and ritual phrases to which the people answered with shouts. A lamb was offered by the Machi, who still singing and dancing, cut its throat and smeared its blood on the face of the sick man. Then the Machi would swoon to signalize that the divine spirit had entered his body. While he was in this trance the visitors whirled into a frenzied dance with deafening noise. The patient seldom survived.

The Machi was also a herbalist gaining and transmitting his knowledge orally. He used *Datura ferox* as an analgesic,



tomatillo as a febrifuge, *Helianthus thuifer* as an antirheumatic. Like all other cultures they had abortifacients and aphrodisiacs.

The Tupi-Guaranies of the Antilles called their medicine man Payé, Piaché or Payni. Their medicinal plants included *Ipecacuanha* as an astringent, *Copaiba* as an antiseptic and tobacco as an anthelmintic. *Datura ferox* was a cardiatonic with them while *Strychnos* was used as an arrow poison.

"In all things relating to disease," says Osler, "credulity remains a permanent fact uninfluenced by civilization or education." Although the power of these medicine men declined to some extent with the establishment of religious foundations and hospitals by the Spanish priests, and miracles took the place of magic, some of their lore was eventually incorporated into the pharmacopœias of the conquerors, and much of the magic still persists.

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Commander W. Paul Briggs, Dean of the School of Pharmacy of George Washington University has been named Chief Pharmacist of the Veterans Administration by General Omar N. Bradley, effective March 8, 1946. As Chief he will direct professional services supplied in veterans' administration hospitals throughout the country. Dr. R. P. Fischelis, through the secretary's office announces the new Chief plans to visit a number of hospitals in order that he may have first-hand knowledge of present facilities and will make a survey of all veterans' facilities in order to improve conditions as opportunity may arise. It is the intent of the Administration to make its pharmaceutical service an outstanding activity. In this the Chief has the assurance of the complete support of the various offices in the Administration. Some vacancies for pharmacists now exist and efforts will be directed toward obtaining high type professional men with the Bachelor's degree for these posts, as law and regulations provide.

Pharmacists who are interested in joining the Veterans' Administration staff should apply to the veterans' hospital or regional offices of the Veterans' Administration which is nearest their home and not to the Veterans' Administration in Washington.

## Editorials

## Question Raised by the Syllabus

I believe that even a cursory examination of a number of pharmacy school bulletins will convince anyone with an open mind that there is a definite need for a suitable Syllabus which can be used as an enforceable minimum standard by the American Council on Pharmaceutical Education. If the present Syllabus does not fill that bill, then we should get busy fast, and change it until it is satisfactory—and that change should not mean weakening it until it is harmless.

If there is no room for curricular experimentation in the present Syllabus, cut it down, even to an irreducible minimum. Whether or not that is done, another suggestion is that maximum hours should be stated for certain of the courses. Why should 96-138 hours be devoted to pharmaceutical calculations in two schools? Why should 80-138 hours be devoted to lecture in fundamental principles and processes in eight schools, and 112-160 hours to the laboratory in the same course in four schools? Why should six schools devote 144-224 hours to lecture in pharmaceutical preparations, and why should six schools devote 228-432 hours to the laboratory in the same course? That is just the beginning of the list.

What is the reason for these excesses? Is it poor teaching, requiring a longer time to cover the subjects? Is it poor training, or lack of training, of the students in the fundamental sciences before they take these pharmacy courses? Is it over-zealousness for certain subjects as a relic of conditions as they were in by-gone years? Or are these over-emphasized courses merely attempts to fill the curriculum in the easiest way possible, thus avoiding the expense of a variety of courses? This is one phase of curriculum planning which has received little attention in published material, and on which plain speaking is past due. Why are 64-96 hours of lecture in drug assay required by 4 schools, 192-324 hours of laboratory in the same course by 4 schools, 144-194 hours of laboratory in food and drug analysis by 2 schools, 112 hours of lecture in biochemistry in one school, 144-192 hours of labora-

tory in biochemistry in 3 schools? Are they trying to give graduate instruction in the under-graduate curriculum?

Hugh C. Vincent  
State College of Washington

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## Inter-Professional Relations in Niagara Falls Make Significant Progress

The event to be discussed in these lines might well have been incorporated into the routine report of news from this region. However, it is the writer's opinion that the event to be described was sufficiently significant as to deserve more than the fleeting attention of a routine news report. Much has been said about the need of bettering inter-professional relations between members of the medical and pharmaceutical professions, and many methods have been proposed for the improvement of such relations. Physicians and pharmacists of Niagara Falls, New York, have done something about it. On Tuesday evening, March 5, the regular meeting of the Niagara Falls Academy of Medicine was given over to a joint meeting of pharmacists and physicians with Dr. Robert L. Swain of Drug Topics as the speaker. The meeting was well-attended by pharmacists of the Niagara Falls area.

Dr. Swain easily won the attention of his audience and guided their thoughts in channels pointing toward greater cooperation in the public health professions. Having demonstrated the importance of the pharmaceutical services in the preparation and distribution of drugs, medicines, and medical supplies and in the dissemination of public health information, Dr. Swain spoke convincingly of the excellent results which have come from past cooperation between representatives of the health professions and of the even greater accomplishments which will result from greater cooperation. Both physicians and pharmacists expressed great satisfaction with the success of the program, and one tangible result has already come from it. An inter-professional relations committee is being planned by the Academy of Medicine which will have as its members representatives of the various public

health professions. Names on the committee will be two representatives from the fields of medicine, pharmacy, nursing, dentistry, and others.

The Niagara Falls Academy of Medicine deserves much credit for initiating this joint meeting. It was a friendly gesture toward the pharmacists of the county and it was recognized as such. Complete support of the enterprise by the Niagara Falls Pharmaceutical Association made possible the excellent representation of pharmacy at the meeting. Members of the faculty of the University of Buffalo School of Pharmacy were present by special invitation.

The idea for such combined meetings as this is not new, nor was this the first of such meetings. It was another cog in the wheel—another step in the right direction. What a wonderful contribution it would be to the public health services of this country if such meetings could be held in every state and every county of the United States—if they could be held not once but often—if they could become a part of the established programs of both professions! Such joint meetings are certainly one of the simplest and most efficient methods for laying common public health problems before the members of both public health groups, and they deserve the best encouragement and cooperation that we can give.

Joseph B. Sprowls  
University of Buffalo

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#### MARRIAGES

Arnold C. Neva, graduate teaching assistant in the University of Minnesota, College of Pharmacy, and Mary-Ann Mattson of Minneapolis, on November 30, 1945.

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#### NEW IN THE FAMILY

Elizabeth Lee Reese.—Born March 20, 1946, daughter of Dean and Mrs. J. Allen Reese, University of Kansas.

Stuart Jonathan Rubin.—Born November 8, 1945, son of Dr. and Mrs. Nathan Rubin, Philadelphia College of Pharmacy and Science.

S. David Feinman.—Born March 10, 1946, son of Dr. and Mrs. J. I. Feinman, Philadelphia College of Pharmacy and Science.

Marilyn Ann Smith.—Born November 15, 1945, daughter of Prof. and Mrs. Willard G. Smith, University of Southern California.

Edward S. Brady, III.—Born April 18, 1945, son of Prof and Mrs. Edward S. Brady, II, University of Southern California.

## The President's Page

## Teaching Loads

There is a need for a study of the question: Is it feasible to derive a formula for calculating the teaching load of a staff member which would apply in all divisions of instruction in a school? Limited studies have been made of this problem.

When a study of this type is attempted one learns that eight class hours per week is considered to be a full-time teaching load in one department of a university, while in another department as much as 24 class hours is considered to be a full load. From this wide difference one might conclude that staff members in the first department lead the leisurely life of the scholar as described in fiction and that those in the second department are overworked. Further study, however, may reveal that extensive services other than teaching regularly are required of the first department, whereas in the latter department almost all grading is done in class or by graders and the preparation for class is relatively light.

**Teaching Load Index.**—As the result of a study made at Purdue University a simple and reasonably satisfactory basis for comparing teaching loads in all divisions of the University and for comparing loads in one term with those in another has been worked out. In equation form, the teaching load index for an instructor is:

Total    Total    Total

$$T = H + F_p + F_g + F_s$$

where  $T$  = teaching load index,  $H$  = class hours,  $F_p$  = preparation factor,  $F_g$  = grading factor, and  $F_s$  = supervision factor.

**Preparation Factor.**—The preparation factor for a course and instructor is equal to the number of hours per week which the instructor meets the class multiplied by a preparation coefficient. ( $F_p = H \times P$ ).

**P. PREPARATION COEFFICIENT  
FOR RECITATION, \*LECTURE, OR \*LABORATORY  
(LESS THAN 40 STUDENTS IN CLASS)**

		More than 50% of students:		
		Freshmen & Soph.	Juniors & Seniors	Graduate Students
Standard	One class	$\frac{1}{2}$	1	2
	Each Duplicate Class	$\frac{1}{4}$	$\frac{1}{2}$	1
Teaching The Course First Time	One class	1	2	4
	Each Duplicate Class	$\frac{1}{2}$	1	2

1. \*For lecture and laboratory courses using perishable material, increase the coefficient obtained from table by 50 per cent.

2. For lectures with 40 or more students in class, double the coefficients obtained from table.

3. For supervision of graduate students doing research  $F_s = 1 \times$  the number of graduate students.

4. No preparation coefficient shall exceed 4.

### Grading Factor

The grading factor for a course,  $F_g$ , equals 4% of net student hours, 2% of net student hours, or zero.

For courses having 50% or more of junior, senior, and graduate students enrolled, use 4%.

If grading is done in class, use 0%. If grading is divided, or if it is done by others than the teacher meeting the class, the 2% or 4% of student hours should be equitable apportioned.

### Supervision Factor

For persons, not department heads, in direct charge of a course not taught by himself, the supervision factor,  $F_s$ , equals  $\frac{1}{4} \times$  the number of classes.

### Application

As a hypothetical example illustrating the application of the formula, the computation of the teaching load index for Professor Ecks is given. His teaching program is purposely made quite varied and heavy. It includes:

- 1 class, Course No. 1,  
2 hrs lect. per week,      63 Freshmen, grading done by Asst.
- 1 class, Course No. 15,  
3 hrs. rec & quizzes,      27 Students (18 Sophomore, 9 Junior)
- 1 class, Course No. 65,  
2 hrs. lect. (Div. A & B)   33 Junior & Senior Students



2 classes, using perishable materials, Course No. 65,	16 Students, Div. A
6 hrs. lab. (3 hrs. each)	17 Students, Div. B
1 class, Course No. 211,	
2 hrs. lect.	11 Students, (3 Seniors, 8 Grad.)
15 class hours.	167 Total

Course No.	Class Hours H	Prep. Coeff. P	Prep. Factor $F_p = H \times P$	No. of Students N	Student Hours $S = H \times N$	Grading Coef. G.	Grading Factor $F_g = S \times G$
1 (Lect.)	2 x 1 = 2		63	126 x	=		
15 (Rec.)	3 x $\frac{1}{2}$ = 1.5		27	81 x	2%	=	1.6
65 A & B (Lect.)	2 x 1 = 2		33	66 x	4%	=	7.5
65 A (Lab.)	3 x $1\frac{1}{2}$ = 4.5		17	51 x	4%	=	
65 B (Lab.)	3 x $\frac{3}{4}$ = 2.25		16	48 x	4%	=	
211 (Lect.)	2 x 2 = 4		11	22 x	4%	=	
Totals	15		16.25	394			9.1

$$T = 15 + 16.25 + 9.1 + F_s = 40.35 + F_s.$$

If Professor Ecks is supervising the research of one graduate student, the supervision factor,  $F_s = 1$  and  $T = 40.35 + 1 = 41.35$ , use 41.

Computation of the teaching load index for the staffs of several departments for a single term during war time when the staff was depleted and classes were smaller than usual gave for the University as a whole a median value of 37, and for the School of Pharmacy a median value of 34.

It is appropriate to call attention to some of the things which the teaching load index does not show. Obviously, to make the index of practical value, it is necessary to compromise between a precise all inclusive measure of teaching service and a small number of terms in the formula. For example, it is recognized that research, self improvement through special studies, and the writing of professional papers and books are distinctly worthwhile services on the part of a teacher which are of benefit to a school. The extent and value of such services is difficult to judge and cannot be included in a teaching load formula. Likewise, service to professional associations and on faculty committees are representative examples of valuable services, recognized as

beneficial to an institution, which are incapable of satisfactory inclusion in the formula. A proper allowance and adjustment of the teaching load for these services must be made by the administrative officers.

The formula presented does not represent a number of hours per week or an expected number of hours per week. It is merely an index number, offering an approximate quantitative means of expressing direct teaching service for purposes of comparison. The formula takes account of some important elements of teaching duty not included in class contact hours or student hours. It serves to bring out in part the increased load required of instructors who handle classes at the professional level as contrasted with the pre-professional level by giving increased weight to the preparation and grading factors for advanced courses. It also emphasized the need for adjustment of the total load of instructors giving graduate courses and the relatively greater cost of graduate as contrasted with undergraduate instruction. By increasing the preparation coefficient for laboratory courses using perishable materials, the formula further tends to equalize courses in different fields and at different levels.

The writer has always felt that the teaching loads in pharmacy schools were too heavy. The general concept of 16 contact class hours being a normal load may be all right for undergraduate courses in languages or mathematics. In professional courses where the teacher is expected to keep informed of the latest advances, be a specialist in his field, and participate in professional activities, a teaching load of 12 contact hours per week should be a maximum; in general, 12 contact hours will give a teaching load index of 27 to 32.

#### **Conclusions:**

1. It is feasible to derive a formula for computing the teaching load of a full-time staff member which would operate throughout the divisions of instruction in a school of pharmacy.
2. The teaching load index offers a satisfactory basis for making comparisons of teaching loads.
3. The teaching load index is superior to class hours as a measure of teaching service because it takes account of such factors as diversity of subjects taught, greater preparation for courses taught the first time, and the usually greater preparation for advanced courses as compared to elementary courses.
4. Class hours or net student hours alone or together are unsatisfactory as measures of teaching loads.

5. Teaching loads within a school in a single term cannot be equalized at all times but they can be equalized in an equitable manner over the academic year.

6. The administrative head of a school can use advantageously the teaching load index along with the other services rendered by a staff member in evaluating teaching loads.

7. A teaching load index within the range 27 to 32 should represent a maximum for instructors at the advanced professional level.

Glenn L. Jenkins

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In a recent report by President Charles Seymour to the alumni of Yale university he calls attention to the dangers involved by universities in accepting grants whether from Government sources or from corporations or from private individuals. The danger lies in the possible loss of academic freedom by the acceptance of such subsidies. Academic freedom on the part of a university means that the institution has the complete right to select its students, build its curriculum, and be responsible entirely for its administration. If these rights are not preserved the whole system of democratic education is in danger.

President Seymour stressed the need for funds for research in the fields of science but insists that unless such funds can be accepted without impairment or surrender of institutional independence of decision their rejection would be the only safe and proper procedure.

This, of course, is the very problem that has always been raised in connection with colleges of pharmacy accepting aid from the drug industry. It is our opinion that those high minded individuals who were responsible for the creation of the American Foundation for Pharmaceutical Education and the establishment of the Board of Grants had this in mind in their planning. They have made it possible to assist pharmaceutical education and research without any strings attached and without the surrender of academic freedom. Furthermore, in our personal contacts with members of the Foundation we have seen no indication or desire to influence independent thinking and action.

—Editor.

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#### IMPORTANT!

The Editor has received notice that many scholarships and teaching assistantships are still available in the pharmaceutical and related sciences at the universities of Purdue, Minnesota, Ohio State, and Florida. For information those interested should address the deans of the colleges of pharmacy at the respective institution.

There are also teaching positions open in one or more of these fields at the University of Washington (Seattle), Duquesne, Howard (Washington), Wayne, (Pocatello), New Mexico, North Carolina, the Medical College of Virginia, and the Division of Pharmacy of the South Dakota State College. These are all positions with opportunities for constructive work and advancement. Requests for information in each instance should be made to the dean of the college of pharmacy.

## The Editor's Page

In the current issue of the *Journal* several rather remarkable papers are to be found. In one Mr. Arthur F. Peterson deals with pharmaceutical sales training and professional relations. The author goes into the subject extensively. He enumerates and discusses in considerable detail the qualifications, both of education and of temperament that should be borne in mind in selecting a sales representative. He goes farther than that and calls attention to the importance of investigating the temperament and the character of the candidate's wife. While we Presbyterians have always considered this a matter of major importance in the selecting of a pastor, I cannot recall that I have ever heard of it being done in industry. The nearest to it was many years ago when I heard Mr. Henry Ford severely criticized because he investigated the family life of his employees. The critic said it was none of Mr. Ford's business what his employees did with their time and how they acted beyond the confines of his plant. But Mr. Ford thought differently, and he was right for what his employees did outside of his plant contributed to the morale and the efficiency of those same individuals within his plant.

While Mr. Peterson goes into every aspect of the problem, it is noteworthy that he stresses time and again the importance of broader and better background and more intensive professional training as a basic necessity for sales training. While he wrote this article to be delivered before the manufacturers of medicinal products it is equally of value to educators who need to keep in mind always the relationship between the educational program and the problems of the professional practice and those of industry. The article is scholarly and well documented.

The charm of Dr. Joseph Rosin's Remington Medal address is to be found in the human touch which saturates it. It is "good medicine" for those who, whether through ignorance or through maliciousness, declare that pharmacy is a vanishing art. Pharmacy like medicine has escaped from the chaos of the days of empiricism. No longer does the physician work with tools of uncertain nature. He now has at his command instruments of precision. In order to bring this about few men have done more than Dr. Rosin, and the picture he

paints of the possibility of pharmaceutical service in the days to come is both an inspiration and a challenge.

In a paper which Dr. Harry S. Harrison of Baltimore delivered before the pharmacy students of the University of Maryland last December he told them how to look at their own profession, how to look at themselves as future members of that profession, and what to be concerned about and what not to be concerned about themselves, as professional men, and pharmacy, as a professional activity. He speaks to them as a father would speak to his children out of the experience of his own life. If all druggists would adopt Dr. Harrison's methods and philosophy and his vision of professional service, we would need no advertising, no slogans like "the pharmacist is more than a merchant," no pharmacy week, no professional relations committees to give pharmacy social and professional standing and all Bernay's-like surveys could be consigned to the waste basket.

And now comes Dr. Robert L. Swain with his usual clarity of thought and expression and declares that already we have attained a high degree of professional relations without even being aware that it was taking place. In his paper on "The Need for the Unification of the Medical Field" he points out the problems and dangers that face medical service in all of its aspects. He points the way as to how we can further "pool our resources" and "coordinate our talents" so as to bring about the best health service by free men to a free public.

These four papers are unusual in their simplicity which is always a sign of greatness.

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A warning which comes from the office of the secretary of the American Council on Pharmaceutical Education relative to the danger involved in contemplating the giving of graduate courses before an institution is prepared to do so is sound advice and most appropriate at this time because of the fact that money is becoming available from numerous sources for the promotion of graduate study. It should be evident to all that any institution which proposes to give graduate training should as the first essential, give a broad fundamental under-graduate preparation. Only after the undergraduate college has become well established should graduate training be undertaken unless an institution expects to operate on the



graduate level only. That is hardly a possibility in pharmacy in our day. No greater harm could be done to pharmaceutical education than to attempt graduate work on a lower level or of a quality inferior to that being carried on in other lines in our graduate schools. On the other hand there are graduate schools in some of our state supported institutions where the groups in control of graduate work have little or no conception of the responsibility which they should have toward fostering graduate training in the health sciences.

Pride and prejudice flourish at their best among graduate faculties. We in the pharmaceutical field have this prejudice to overcome on the graduate level as we have had to in the undergraduate field. To do so will require productive research on a level comparable to that done in other areas of graduate work.

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In the recent issue of *Time* that magazine calls attention to the plight of "The Vanishing Druggist." This is an affliction of the lay press which occurs with the same regularity as the periodicity of the heart beat and although heart beats periodically it doesn't stop beating and although the lay press with a comparable periodicity keeps on vanishing the druggist, the druggist doesn't vanish. The surprising thing is that a magazine of *Time's* standing which discusses so intelligently the affairs of the world should exhibit such ignorance concerning the responsibilities which are placed upon the pharmacists by the federal and state laws and the municipal ordinances of our land. From week to week *Time* devotes two or three of its columns to medicine without apparently realizing that half of what is said is pharmaceutical rather than strictly medical. Once *Science News Letter* exhibited that same lack of fine discrimination which is the druggist's stock in trade, but that situation has been remedied.

If the Editor of *Time* will take the trouble to peruse even casually the study that was made by the Commonwealth Fund a number of years ago (Basic Materials for a Pharmaceutical Curriculum, McGraw-Hill Company) he will undoubtedly be surprised at the service of the druggist as revealed by that study and if he should read "The Romance of Pharmaceutical Education" in the December, 1945, number of Squibb's Memoranda he will learn of the spectacular advances made in the



training of the pharmacist for professional service since the turn of the century. He who belittles the service which pharmacy renders to medicine, to agriculture, to horticulture, to the animal husbandry industry, to industry in general, and to the maintaining of the health and the morals of a community simply proclaims his own ignorance and we need to pay but little attention to him.

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Men take just pride in honors that come to their institutions and to their faculty members and students. So the Editor hopes he may be forgiven for being pleased that this year the Ebert prize goes to a member of the staff of the College of Pharmacy of the University of Nebraska, Dr. Paul Jannke, with honorable mention to the co-author and collaborator, Howard Jensen, who is now in the service. This is the second time this honor has come to Nebraska, the other recipient being Dr. Albert Schneider, now deceased. But the Editor has another reason for pride in this accomplishment. Almost forty years ago he began to advocate the necessity of including the biological sciences in the pharmaceutical curriculum. Dr. Jannke's study is primarily a pharmacological one. It is in line with the trend which pharmaceutical education has taken in the last four decades and in complete harmony with the trends pharmaceutical education must take as suggested in the report of the American Council on Pharmaceutical Education for 1944, and yet we find men who advocate that physiology, in the undergraduate curriculum, be reduced to a one-semester course with laboratory and pharmacology be reduced to a one-semester course without laboratory. I am reminded of an incident that happened in my own university when a member of the chemistry department sent a graduate student to find out how a rooster would act under the influence of strychnine. I asked him if he knew how a rooster would act without strychnine. That was the basic physiological problem.

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We hope before the copy for this issue of the Journal is closed we will know the exact date and place of meeting of the next convention. However, a meeting will be held and it is time to begin the preparation of papers and reports for that convention. It will be a great day when we can enjoy the inspiration which comes from our annual get-together.

Rufus A. Lyman

## Gleanings from the Editor's Mail

I am pleased to set forth my attitude toward acceleration as a post-war program, as you requested in your recent letter. I welcome such an opportunity because, on occasion, I have spoken in favor of the accelerated program as a war measure. I have always felt, and still believe, that there was a real need for acceleration during the war period. It aided greatly in keeping our colleges in operation, even on a much depleted basis, and prevented what might have been interpreted as an acknowledgment that pharmacy was so impotent during a time of great national peril as to have no vital place in the war program.

I have always exercised great care to express my approval of acceleration solely as a war-time measure. With the advent of peace, I can see no justification of the continuation of the accelerated program. As a matter of fact, much harm might result therefrom.

In discussing this question, we should keep in mind that during the war years, with thousands of registered pharmacists in the military forces, an adequate pharmaceutical service was maintained by the pharmacists of the country. It is true that this service was maintained at the cost of real hardship on many registered pharmacists. This burden could have been greatly reduced if registered pharmacists had been able to devote more of their time to strictly professional services and less to merchandising activities.

We all recognize that there is, at the present time, a shortage of registered pharmacists, so far as adequately manning our present outlets is concerned. I am of the conviction, however, that approximately one-half of our present retail pharmacies could furnish the people of the country with an adequate pharmaceutical service if they were differently organized and properly distributed.

The oft-repeated statement that the overcrowding of any profession tends eventually to weaken that profession is especially applicable to the profession of pharmacy. When most professions are overcrowded, the individual practitioners tend to suffer more than the professions involved. The reverse is true in the case of pharmacy. The pharmacist can always find something to do in his place of business. When his professional work decreases, due to overcrowding or other reasons, the tendency is for the pharmacist to still further broaden his activities. He adds to his already numerous sidelines, his professional work is still further diluted, and his stature as a professional man decreases, even though he has not suffered too seriously from a financial standpoint.

The objective of pharmaceutical educators should be to maintain a reasonable, but not excessive, shortage of registered pharmacists, as one of many factors facilitating the continued growth of pharmacy as a profession and less as a business.

I can think of no profound reason for the continuance of the accelerated program in colleges of pharmacy. I could enumerate many

reasons why it should be abolished. In terms of our experience, acceleration turns out an inferior product and tends to place the emphasis on quantity rather than the all-important qualitative factor.

Pharmacy's primary need is not more, but better, pharmacists. Acceleration can make no contribution to that end. It was an appropriate war measure. The need for it is now past. It should be dismissed with due appreciation for whatever service it may have been to the profession.

March 19, 1946  
Newark, New Jersey

ERNEST LITTLE, Dean

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We have passed through the war period with comparatively few troubles, and we are practically going ahead on an even keel.

We acquired a likeable piece of property adjacent to the college during the war period but we have been in no financial position to develop it as should have been done. It hasn't been occupied as yet but have sympathy on a poor old dean who has a beautiful office all ready for his occupancy and a beautiful new library, empty, awaiting an incompleated library stack room. Maybe some day the above property may bloom forth into well organized class rooms, resplendent with new furniture and all the finest accoutrements.

Providence, Rhode Island  
March 19, 1946

W. HENRY RIVARD, Dean

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I thought it might be of interest, if you have not already obtained the information elsewhere, to note in the American Journal of Pharmaceutical Education that representatives of the U. S. Public Health Service and the U. S. Office of Education are now stationed at each of the Regional Consumer Goods Offices of the War Assets Corporation. Their job is to serve school buyers for surplus property.

In other words, if a College of Pharmacy is interested in obtaining surplus property available from the Government, it has a friend at the regional offices of the War Assets Corporation which disposes of this property. The friend is either the representative of the U. S. Public Health Service or the representative of the U. S. Office of Education, both of whom are sympathetic with institutional requirements in our field.

We definitely had pharmacy colleges included in the list of institutions which may obtain the special discount on this surplus property.

Washington, D. C.  
March 20, 1946.

ROBERT P. FISCHER, Secretary

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## Notes and News

**University of Buffalo, School of Pharmacy.**—This year the University celebrates its centennial anniversary and as pharmacy's part in the program the school is reviving the spring clinics which were held annually up until the time of the war and is also offering a week of refresher courses for all former students. The spring clinic will be held on April 23, 24 while the refresher courses will begin on the day following the clinic and will continue through May 3.—Mr. Francis X. Sturner, chief pharmacist of the Buffalo General Hospital, spoke on "Hospital Pharmacy" at the March meeting of the student branch of the A. Ph. A.—Mr. Mearl Pritchard, proprietor of a professional pharmacy in Buffalo and special lecturer at the school, will take part in a refresher course to be offered by the school of medicine during April. Mr. Pritchard will lecture on "New Drugs and Practical Vehicles."—At the beginning of the present semester the school was deluged by an unusually large group of returning service men seeking admission. When the "dust" of registration days had settled and all the records were complete, it was found that the total number of registrations in the freshman class had risen to the surprising number of eighty-nine full-time students, forty-seven of whom were second-semester registrants. Plans are now being made to accommodate approximately one hundred sophomores and an additional hundred new freshmen when classes are resumed next September.—Dean A. B. Lemon was named chairman of a special committee appointed by Chancellor Samuel P. Capen to study the health needs of the student body and to decide whether a student health program is necessary or feasible at this time.

**University of Connecticut, College of Pharmacy.**—In June, at mid year, all work will close until September at which time the sophomore courses will be resumed where they were dropped. No freshman will be taken in until next September.—There is a movement on foot now by the University and the State Medical Society to study the need of a medical school in the University. If such a school is established, the college of pharmacy will be housed with it as will the already existent school of nursing. The plan is to house the schools in new buildings either in New Haven or Hartford. It will be some time before plans can materialize.

**University of Southern California, College of Pharmacy.**—A total of 225 are now enrolled. The list includes a number of former students who went into the service.—Last summer a fire destroyed a part of the building which houses the pharmacy and chemistry departments. Repairs have now been completed with many improvements and with modernized equipment.—The student publication, *Pharm. S. C.*, is now in its second year of publication. The student editors have made it a creditable publication, and it is well supported by the alumni, the subscribers and the advertisers.—The California State Board of Pharmacy has issued a leaflet, "Official Antidote," giving the labeling requirements of the various poisons.—The committee that did the work was headed by Dean Troy C. Daniels of the University of California. Other members of the

committee were Dr. Hamilton Anderson, University of California; Dean Alvah Hall and Dr. Clinton H. Thienes, University of Southern California; Dr. P. J. Hanzlik, Stanford University; Dr. J. C. Geiger, Director of Public Health; and Mr. Joseph Swim, Toxicologist to the Coroner, both for the City and County of San Francisco. The work required researches by the various members of the staffs of the institutions represented.

**University of Colorado, College of Pharmacy.**—Dr. D. W. O'Day spoke before the Parent-Teachers Association of Lafayette on February 17 on "Drugs which may save your Life". On April 3, he visited two high schools in Denver and spoke to the seniors who were interested in attending the University. The March issue of the Colorado Alumnus carried an article by Dr. O'Day on "Medicine and Medicine Makers—Past, Present, and Future." Dr. N. F. Witt of the department of chemistry gave a lecture on the "Chemical Background of Water Analysis and Water Treatment" before a session of the Waterworks School in Denver recently and Alvin Voight, a pharmacy graduate, gave the demonstration which accompanied the lecture.—Ramona Parkinson has been chosen faculty advisor to the local student branch of the American Pharmaceutical Association.—Ensign Edward Christensen, '43 has been discharged from the Merchant Marine and is now an assistant in chemistry and registered in the graduate school.—District No. 8 is planning for a meeting in May in Denver.

**University of Connecticut, College of Pharmacy.**—A new freshman class of 35 veterans was admitted in February bringing the total registration to over 90 which is the largest since 1932 when the course was lengthened to four years. The next freshman class will be admitted in September. Already far more applications have been received than can be accommodated. All applications are being held until after June 30 when the committee on admissions will select from them the best qualified up to the limit of the number that can be taken. Applications from non-residents of Connecticut cannot be considered and all applicants in the lower half of their high school class will have to secure corresponding higher scores on a scholastic aptitude test in order to qualify for admission.

**Drake University, College of Pharmacy.**—James R. Weeks has been appointed instructor in pharmacy. Mr. Weeks is on terminal leave from the Army where he served as a captain in the Chemical Warfare service. He recently returned from two years service in the Pacific. He is a graduate of the College of Pharmacy of the University of Nebraska and has also taken graduate work there.

**University of Florida, School of Pharmacy.**—John L. Voigt was awarded the degree of Doctor of Philosophy at the January commencement exercises.—Mary Ware, Edith Ware, and Annella Barber were initiated into Kappa Epsilon.—The Board of Control has limited enrollment in the University to 5000 students for the year, 1946-1947. Florida veterans and residents will be given preference.—The sum of \$250,000 has been appropriated for an addition to the Chemistry-Pharmacy building. Plans are now being drawn.—Five positions as part-time graduate assistants will be available for the year 1946-47 with possible majors in



pharmacy, pharmaceutical chemistry, pharmacognosy or pharmacology. These positions require about twelve hours per week for performance of departmental duties assigned. Salary to be \$600 to \$720 for the academic year of nine months with remission of some fees, such as non-resident tuition. In order to qualify, candidates must have a B. S. in Pharmacy from a recognized college of pharmacy and a scholastic average of approximately "B" or higher. Evidence of good moral character and success in positions previously held is required. The Graduate School expects to have available a number of scholarships, fellowships, and research assistantships at \$450 to \$1200. These will be awarded on the basis of scholarship. Holders of the same may major in any department of the University. Application blanks may be obtained from the Director, School of Pharmacy, University of Florida, Gainesville.

**George Washington University, School of Pharmacy.**—Fifty-seven freshmen enrolled for the winter term beginning February 1. A number of former students have returned from service to complete their work, and approximately ten new students from other schools were admitted with advanced standing. Total enrollment in pharmacy will probably be up to the highest pre-war level by next September. Applications already are being considered for the fall term opening in September. Registration will be limited to approximately fifty new students.—Dr. Lea Gene Gramling was recently released from active duty in the Army. He will continue on war leave from the University until the opening of the fall term.—Lt. Charles W. Bliven returned to the staff as associate professor on March 1, following his release to inactive duty in the Navy.—Recent appointments effective February 1, 1946 in the school were: Daniel W. Linehan, laboratory technician; George Chilcoat, and William Tant as student assistants.—A graduate program leading to the degree of Master of Science in Pharmacy is now offered. This work may be pursued in the fields of pharmacology, pharmacy or pharmaceutical chemistry.

**State University of Iowa, College of Pharmacy.**—Robert L. Van Horne, '41, has returned to the university after separation from service in the Navy. He is assisting in the pharmaceutical laboratory and teaching a class of entering veterans in metrology and calculations.—Wendell Kerr, '41, who served in the Army Medical Corps, is Assistant in the Drug Service.—Prof. Zada M. Cooper has completed a history of the State University of Iowa, College of Pharmacy, which is to be included in a history of the University. The complete history is to be included in the general plan for an elaborate observance of the Centennial Anniversary in which every phase of the University's cultural and academic history will be reviewed in a series of programs.—Dr. James W. Jones accompanied a group from the University to Maquoketa on April 12th and to Eagle on April 25th to participate in Career Day and Guidance Programs sponsored by the high schools in those towns. Helen Turnbull and Alfred Halpern have been elected to membership in Rho Chi. Mr. Halpern has also been elected to membership in Sigma Xi by the Columbia University chapter when he received the Master's degree. He is now working toward the Doctorate at Iowa.

**University of Maryland, School of Pharmacy.**—The American Foundation for Pharmaceutical Education scholarships for the current



year have been awarded to Harold B. Singer, Gertrude B. Robson, William B. Gray, and Ferdinand L. Wirth.—Gene Natalie Geist, a second-year student, is the recipient of a four-year scholarship from the Vick Chemical Company through the American Foundation for Pharmaceutical Education.—Shirley S. Shulman, also a second-year student, has a scholarship from the Read Drug & Chemical Company of Baltimore.—Sally Degan Weinberger was awarded the Theodocia Mahon Scholarship from the Western High School for 1945-46.—Mr. Benjamin F. Allen, who was Captain in the Medical Administrative Corps of the 142nd General Hospital, and served in the Pacific area for more than three and one-half years, is a new instructor in pharmacy.—Yen-Tsai Chang, who was a special student in 1945, has joined the Bureau of Biological and Pharmaceutical Products of the National Public Health Administration, 138 Kiangai Road, Shanghai, China. Mr. Chang hopes to return to this country for further graduate study.—Dr. LeRoy Curtus Keagle, who received the Doctor of Philosophy degree December, 1944, is now assistant professor of pharmaceutical chemistry at the school of pharmacy of Rutgers University.—Frank A. Bellman, who was a First Lieutenant in the Medical Corps of the 142nd General Hospital for more than three and one-half years, has returned and is a full-time graduate student working for the Doctor's degree.—The annual meeting of the American Council on Pharmaceutical Education was held in the school building on January 18 and 19, 1946.—R. C. Amin of Virsad, Bombay, India, who was interested in pharmaceutical production in India, is working for the Master's degree in pharmaceutical chemistry.—Dr. George P. Hager, assistant professor of inorganic and organic chemistry, addressed the Baltimore Branch of the American Institute of Chemists on January 17, on the subject of "Hormones of the Adrenal Cortex."—William B. Baker, B. Sc., 1932, M. Sc., 1933, who has been associated with the Calco Chemical Division of the American Cyanamid Company of Boundbrook, N. J. is now in Medellin, Colombia, South America.

**Massachusetts College of Pharmacy.**—The annual refresher course will be held during the latter half of May. Dr. E. L. Newcomb, Secretary of the American Foundation for Pharmaceutical Education will deliver one of the principal addresses. As a service to veterans, this year's course is considerably longer than those of previous years.—Raymond W. Vander Wyk, recently discharged after four years of service in the Army has returned as assistant in biology and pharmacognosy.—Gilman N. Cyr has been appointed an assistant in pharmacy.

**The University of Nebraska, College of Pharmacy.**—Dr. J. B. Burt, who for the last two and one-half years has been in Washington, D. C. as Director of the Chemicals, Drugs and Health Supplies Division of the Office of Civilian Requirements under the War Production Board, has returned to his post as chairman of the department of Pharmacy and Pharmaceutical Chemistry.—Dr. Donald M. Pace presented two papers at the meeting of the A. A. A. S. at St. Louis on March 27-29.—The enrollment in pharmacy jumped from 37 to 83 at the beginning of the second semester including six graduate students.

**The University of North Carolina, School of Pharmacy.**—A total of 87 first year and 44 second year students have enrolled during the current year. Junior and senior classes are small although a few veterans have returned.—After seven years of service, with an enviable record, Dr. E. A. Brecht has resigned to accept a position in the College of Pharmacy of the University of California.

**Ohio State University, College of Pharmacy.**—Dr. Loyd E. Harris, who was recently separated from the United States Army with the rank of Lieutenant Colonel, has been appointed professor of pharmaceutical chemistry. Dr. Harris was on the staff of the University of Oklahoma, School of Pharmacy until he joined the service in March, 1942. After entering the service he was stationed for some months at the chemical warfare branch headquarters at Edgewood Arsenal in Baltimore where he was chief of technical instruction and director of the training staff. Later he served with the chemical warfare intelligence and made a survey of the German chemical industry.

**University of Oklahoma, School of Pharmacy.**—Mr. E. Sutton, of the National Wholesale Druggists Association has presented the library with 35 volumes of the NWDA Proceedings; also a gift copy of the "History of the Association of Military Surgeons of the United States, 1891-1941," by F. E. Hume, has been received. A number of late texts and books of historical interest have been added by purchase.—The registration in the fall semester was double that of the previous year, and the registration in February of 1946 was double that of last September.—The 12th annual convention of the Oklahoma University Pharmaceutical Association was held on March 1 with 125 in attendance. Five societies which constitute the integral parts of the association held programs throughout the day. Prizes were awarded for the best papers and officers for the coming year were elected. The Lehn and Fink Medal went to Edgar Nicholson as the highest ranking senior. The convention closed with the annual ball in the student union.—During the second semester the school is sponsoring eighteen 15-minute radio programs over WNAD every Friday afternoon at 4:15.

**Philadelphia College of Pharmacy and Science.**—Dr. Donald P. LeGalley has returned from government service to the department of physics.—On the occasion of the 125th anniversary of the founding of the college, honorary degrees were granted to Dr. George Urdang and Dr. Paul A. Kind.—Registrar John E. Kramer was a speaker on the March 17 program of the Evening Bulletin Veteran's Advisory Forum of radio station WPEN.—At the annual meeting on March 25, Mrs. Elizabeth W. Johnson was elected librarian.—The Alumni Association is planning a dinner on June 5 in honor of the graduates who served in the Armed Forces during the war.—Dr. Ivor Griffith has been named a member of the advisory health board of the Commonwealth of Pennsylvania by Governor Edward Martin.—Prof. Linwood F. Tice has been appointed to the chair of organic chemistry at the Wagner Free Institute of Science in Philadelphia. President Griffith, who formerly held this position, was elected honorary professor of organic chemistry.—Dr. Arno Viehoever, formerly professor of biology, left Washington recently on a "Globester," C-54, Army Trans-

port Plane for Bangkok, Siam, with a mission which will collaborate with a similar mission from Great Britain on the problem of securing rice and other needed materials for the liberated countries in Asia and for the occupational forces. Dr. Viehoever expects to be in Siam four to six months, and longer if it is necessary to wait for the maturity of a second rice crop. He was in Siam from 1934 to 1938 as technical advisor to the Siamese government on opportunities for the export of botanical drugs.

**University of Pittsburgh, School of Pharmacy.**—Six new members have been added to the faculty. Mrs. Gizella B. Segin and Miss Anna M. Stuchell have been assigned to the pharmaceutical laboratory; Mr. Robert Walkingshaw, George W. Meals and John E. Lehnhardt to the chemical laboratory, and Edward A. Reif to the biological laboratory. Since graduation Mrs. Segin has operated her own store. Miss Stuchell has served for two and one-half years with the hospital corps of the Navy on the west coast. Mr. Walkingshaw was a lieutenant with an amphibious naval force. Mr. Meals was a lieutenant and served aboard the U. S. S. Benham. Mr. Lehnhardt, 1943, is just out of the service.—The George A. Kelly (Senior) scholarship fund has been established by the George A. Kelly Co. of Pittsburgh through its president, Miss Eleanor P. Kelly. Scholarships will be available to qualified graduates with the bachelors degree from a recognized college of pharmacy and who wish to make their life's work teaching in the pharmaceutical field.—Ninety-four per cent of the new freshman class are veterans. The enrollment is 62 per cent veteran. Women constitute 18 per cent of the student body.

**University of South Carolina, School of Pharmacy.**—The present enrollment is 109, the largest in history, 57 new students, the majority of whom are veterans and 12 former students, all veterans enrolled on March 1.—Prof. C. M. Gittinger addressed the student branch recently on the topic "Merchandising and Salesmanship in Retail Pharmacy."—James Funderburk, a pharmacy student, is the temporary president of the veterans' organization on the campus.—One hundred dwelling units for married veterans are now under construction.—Two thousand nine hundred students are enrolled in the whole university for the current semester, 1200 of them are veterans.—Plans are under way for the annual pharmacy banquet which was discontinued during the war period.

**University of Tennessee, School of Pharmacy.**—Dr. Karl Goldner has completed a revision of the pharmacy curriculum, effective in September of this year. Many changes have been made toward modernizing it.—Dr. Albert H. Musick has completed 250 2"x2" slides, both in black and white and in color for use in the courses in botany and pharmacognosy. A Spencer Delineascope has been added to the equipment.—New members of Kappa Psi are Joseph Blackbourne, Charles Ary, Lester McGraw, and William Jones.—The 1946 class is now filled and applications are being taken for the September, 1947 class. Service men will make up the bulk of the 1946 class. The average age is 34. This is the last class that will be admitted on the accelerated program according to present plans.

**Union University, Albany College of Pharmacy.**—Fifty-two freshmen students and twenty-five upperclassmen were admitted on February 25.

On the same afternoon six candidates received the Bachelor's degree.—The accelerated program has been discontinued except for a split summer session this year to enable certain students to enter the regular program in the fall.—Dr. Adam Walker and Miss Louise Jewett, both formerly of the New York State College for Teachers have been appointed to the staffs of economics and English respectively.—Miss Claudia Stafford has been appointed instructor in pharmacy.

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**University of New Mexico, College of Pharmacy.**—When a new college of pharmacy is established everyone is interested in its progress and the attitude of those whose welfare its development represents and the support it receives from those sources, and that means the general public within the state and the profession, not only within the state, but beyond its borders. For these reasons all eyes have been turned toward the University of New Mexico and its youngest college, the college of pharmacy. Forty-three new students registered for the second semester's work in addition to the re-enrollment of twenty-four who registered when the work opened in September of 1945. A number of first term courses are being offered the second semester in order that by attending the summer sessions, incoming new students may eventually catch up with those who entered the first semester. The college of pharmacy sponsored, proposed local branch of the American Pharmaceutical Association held its first regular meeting February 21. Dr. J. P. Wernette, president of the University addressed the group on "The Present and Future Status of the College of Pharmacy." Dr. Wernette reviewed the work that had been done by the New Mexico Pharmaceutical Association and the University officials which led to the establishment of the college and paid tribute to those who have given fully of their time and efforts for the future of the profession of pharmacy in New Mexico. He said that the University is pleased with the manner in which the college has been organized and its functioning and outlined plans for the eventual housing of the college.—On March 21, Dr. S. W. Adler spoke before the pharmacists and the student group on the "Economic Aspects of Socialized Medicine."—Dr. B. H. Briggs of Albuquerque, co-owner of the Sun Drug Company, has presented a gift of \$1,000 for the purchase of teaching equipment for the college. The scholarship loan fund created by the pharmacists of New Mexico has reached the sum of \$10,335.—The college of pharmacy now has its own section in the University's Coronado Library. The library has received as gifts, book and journals from various sources, the country over. Mr. G. A. Neel, secretary of the state association, spearheaded a drive for books from the druggists of New Mexico with excellent results. Each contributed book will contain an appropriate plate on the inside cover noting its contributor. The pharmacists of the state are already realizing the impact of the professional worth to them personally of the existence of their own college of pharmacy. At regular intervals they are receiving resumes on timely professional topics. Four such bulletins have been issued to date. The subjects considered were DDT, Streptomycin, Insulin, and Dangerous Drugs.

## Miscellaneous Items of Interest

### A Memorial

#### CARL LOUIS AUGUST SCHMIDT

Carl Louis August Schmidt, noted scholar, Professor of Biochemistry and Chairman of the Division of Biochemistry of the University of California, died in Berkeley, California, February 23, 1946, after having served the University of California long and faithfully. He was born on March 7, 1885 in Brown County, South Dakota, the only child of Gustave and Friderike Schmidt. At an early age he moved to California with his parents who settled in St. Helena. Subsequent to his graduation from the St. Helena High School in 1904 the family moved to Berkeley where Carl entered the College of Chemistry of the University of California. During the period of his collegiate training he served as an assistant in the Department of Chemistry and also taught a laboratory course in chemistry at the A to Zed School in Berkely.

An outstanding characteristic of Dr. Schmidt was the almost boundless energy which he devoted to any enterprise he considered worthy of attention. This was manifest throughout his life, first appearing during his early school years. During the period of his attendance at the St. Helena High School he was assistant editor and business manager of the school publication to which he contributed to the section on poetry. During his collegiate years not only did he carry on numerous extra-curricular activities but he found time to prepare and publish four articles of a scientific character. As a result of his interest in research and his scholastic ability he was made a member of Sigma Xi. During his senior year in the University he was one of three academic students permitted to study biochemistry under the direction of Professor Alonzo E. Taylor, under whose guidance he was granted the Master of Science degree by the University of California in 1910.

Returning to the University of California in 1912 he spent one year in the study of bacteriology and in 1913 he was appointed Chemist, Bacteriologist and Food Inspector for the City of Berkeley where he organized the municipal laboratory. Again returning to the University he completed the requirements for and was awarded the Ph. D. degree in 1916. The doctorate work was completed under the guidance of Professors Gay and Robertson and was supported by a grant from the Hooper Foundation for Medical Research. In 1918 he was made Assistant Professor of Biochemistry and Pharmacology. He advanced to the rank of Associate Professor in 1921 and in 1924 he was made Professor and Chairman of the Department of Biochemistry, a post which he held with distinction until the time of his death.

Subsequent to the death in 1937 of Henry B. Carey, Acting Dean of the University of California College of Pharmacy, Dr. Schmidt was called upon to accept the deanship of the College of Pharmacy. He held this post until 1944. During these years, Dr. Schmidt actively engaged in the reorganization of the College of Pharmacy. The reorganization was accomplished along three lines: the addition of new mem-



bers to the staff, alterations in the curriculum, and the improvement of the physical facilities. His interests and activities were not confined to undergraduate instruction. In 1939 he took the leadership in the establishment of graduate study in the field of pharmaceutical chemistry and during his deanship three students received the doctorate degree in this field. His election to the committee on Revision of the United States Pharmacopoeia in 1940 afforded Dr. Schmidt another opportunity to serve the profession of pharmacy in which he had first gained an interest thirty-five years before. His untiring industry, tremendous zeal and remarkable ability in organization enabled him to carry on his many duties in a most effective manner. In 1938 Dr. Schmidt served as Acting Dean of the University of California Medical School for a brief period.

At different periods Dr. Schmidt served as President of Annual Reviews, Inc., as a member of the Editorial Committee of Annual Reviews of Biochemistry, and on the Editorial Committee of the Society of Biological Chemistry. During the last three years of his life he served as an editor of the Proceedings for the Society of Experimental Biology and Medicine. He was a member of the Chemical Society, the American Chemical Society and numerous other scientific organizations.

As a culmination of his work on amino acids and proteins, in which field he was a recognized authority, he was the principal author and served as editor-in-chief of the authoritative volume on "The Chemistry of the Amino Acids and Proteins."

The numerous published works of Dr. Schmidt attest a breadth of scientific and literary interests. All are characterized by keen observation and clear thinking.

Dr. Schmidt is survived by his widow Esther Skolfield Schmidt, three children, Dr. Stanwood S. Schmidt, Alfred C. Schmidt, Esther Schmidt, and one grandson, Alfred Carl Schmidt, Jr.

Troy C. Daniels

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## American Pharmaceutical Association and Related Organizations to Meet in Pittsburgh, Pa., August 25-30, Inclusive

The 1946 meetings of the American Pharmaceutical Association, the American Association of Colleges of Pharmacy and the National Association of Boards of Pharmacy will be held at the Hotel William Penn, Pittsburgh, Pa., August 25-30, inclusive.

Decision to hold the annual convention at Pittsburgh was reached following an exhaustive survey by a committee of the Council consisting of Dr. B. V. Christensen, who is also Chairman of the Executive Committee of the American Association of Colleges of Pharmacy, Mr. P. H. Costello, who is also Secretary of the National Association of Boards of



Pharmacy, and Dr. Robert P. Fischelis, Secretary of the American Pharmaceutical Association.

The various cities which had issued invitations to the Association and had been given consideration by the Committee on Place of Meeting at the last convention were surveyed, and it was found that the most adequate hotel and meeting facilities available during the week of August 25 were those of the Hotel William Penn, Pittsburgh, Pa.

It is well known that convention facilities have not yet reached pre-war status in most of the cities of the United States and that travel conditions are not as yet ideal. Furthermore, it was necessary to arrange the meeting in the latter part of August because of the request of the American Association of Colleges of Pharmacy to hold the annual meeting prior to September 1 and because of the fact that courses in colleges of pharmacy throughout the United States are still being given throughout the summer months.

While there will be some streamlining of the convention program, the schedule for the 1946 convention will follow in essence the prewar convention schedule of the three associations.

The American Association of Colleges of Pharmacy will begin its meetings on Sunday afternoon, August 25, and continue until 4:00 p. m., Tuesday, August 27.

At 4:00 p. m., Tuesday, August 27, the first session of the House of Delegates of the American Pharmaceutical Association will be held, and on the same evening the joint banquet of the American Pharmaceutical Association, the American Association of Colleges of Pharmacy, and the National Association of Boards of Pharmacy will precede the first general session of the A. Ph. A.

Wednesday, August 28, will be devoted to one session of the House of Delegates and meetings of the Sections.

Thursday, August 29, will include a session of the House of Delegates, a general session and sectional meetings.

Friday, August 30, will be devoted to the final session of the House of Delegates, sectional meetings and the final general session.

Arrangements with the hotel are such as to permit the housing of a major portion of the expected attendance, but there are other hotels in Pittsburgh which will be in a position to take the overflow. However, all who expect to attend the convention must make their reservations as far in advance as possible and reservations will, in most cases, continue only until Friday evening because of the considerable pressure for hotel space by other conventions and transient guests.

Pharmacists who expect to attend the convention are urged to make their reservations as early as possible so that the hotel may be in a position to allot a satisfactory number of rooms. Wherever possible, it is requested that double rooms be used, as the number of single rooms is exceedingly limited.

The program, as stated above is, of course, tentative and will be supplied in greater detail later.

It is hoped that meetings of related organizations, such as the American College of Apothecaries, the American Society of Hospital

Pharmacists and the Conference of Pharmaceutical Association Secretaries will be held during the convention week, but the Council has instructed the Committee on Standard Program to so arrange the schedule that there will be no interference with the program of the meetings of the American Pharmaceutical Association. Arrangements are now being worked out with these organizations and as soon as the completed program is approved, a further announcement will be made.

Robert P. Fischelis, Secretary

## A Warning!

At a meeting of the American Council on Pharmaceutical Education held in Baltimore, Maryland, on January 19, 1946, the attention of the Council was directed to the large number of colleges of pharmacy which are contemplating offering graduate courses of study. This development is disturbing because it is the opinion of the Council that most of our colleges of pharmacy are inadequately staffed and lack the facilities necessary to offer graduate work of a satisfactory level at the present time, and that much harm would be done to the progress of pharmaceutical education if these colleges were to inaugurate programs of graduate study before these deficiencies are corrected.

It was, therefore, decided to give publicity to the Council's policy in this regard which is as follows: It is the policy of the American Council on Pharmaceutical Education to view with disfavor, so far as accreditation is concerned, any college of pharmacy which offers graduate work unless the undergraduate program is found to be conducted on an unusually high level and the graduate work offered is comparable in every way to that done in the better university graduate schools.

A. G. DuMez, Secretary.

February 15, 1946.

## A Personal Word from the Philippines\*

"About five years have elapsed since we last met in Richmond, Washington, and in Philadelphia, and is more than four years now that we have not heard from each other. As you probably heard from other sources, we have gone through terrible sufferings in the Philippines particularly in the south district of the City of Manila, where we had lost every conceivable property both private and public.

"You might be interested to know that our former dean, Mariano V. del Rosario, whom I succeeded as Dean, and was with you in the

\*These paragraphs were abstracted from a personal letter to Dr. E. Fullerton Cook from Dr. Patrocinio Valenzuela who is now dean of the College of Pharmacy of the University of the Philippines and who is now serving as temporary chairman of the U. S. P. Auxiliary Commission of the Philippines. We are grateful to Dr. Cook for this first hand information about our friends and colleagues in the Philippines.  
—Editor.

1930 meeting, and the United Pharmacopoeial Convention, died on April 1, 1943. One day, late in the afternoon, he was taken by the Japanese military police to the notorious Fort Santiago on suspicion that he was owner of several automobiles which was not true and naturally made him worry so much while confined in that place known for terrible tortures and killings committed by the enemy. Owing to the proof later found that the Japanese military police made a mistake, the late dean was released very late in the evening. Before his release, all the members of his family and our personnel in the College were kept worried, as we did not know the charges presented against him. This incident apparently had contributed to his early death. When the Americans were liberating Manila, the wife of the late dean was killed. She was among the victims of Japanese massacre at a place not very far from the premises of the College of Pharmacy.

"Our building was taken by the Japanese by force from the Philippine Government and used as a fortress. As a result, the entire building with practically all of our equipment, records and library collections, were burnt or destroyed. My own two small apartments located one block from the College of Pharmacy building was also destroyed, and whatever concrete structure that remained after the liberation was bulldozed by the U. S. Army because they needed our lot for milling and storing lumber.

"Besides Mrs. del Rosario, a number of the members of our faculty became victims of the massacre, such as Dr. Candido M. Africa, Professor and well known research worker in Parasitology, Professors Del-fin de la Paz and Telesforo Tienzo, Professors of Mathematics and Mr. Jose Lazaro, Secretary of the President of the University of the Philippines and Instructor in Commercial Pharmacy and Accounting and Bookkeeping. Also a son of one of our laboratory helpers was killed among those taken for forced labor. Another laboratory helper and his son were directly hit by shells and shrapnel. I would like to add also that your and my intimate friend, former Dean Antonio G. Llamas of the Manila College of Pharmacy and dentistry, together with his wife adopted son and father were all killed by the Japanese in the massacre of Manila. This is only part of the story as it directly concerns us. Undoubtedly, you must have heard other stories regarding the great sufferings that our people have gone through.

"Our College was reopened together with the other units of the University on August 6, 1945. On January 3, 1946, we begun the second semester of the academic year 1945-46 to end on May 3 of this year. The enrollment was 166 during the first semester, and 178 during the second semester. Owing to our problem of space, facilities and equipments, we had adopted a quota for each college or school of the University of the Philippines. For instance, in the first semester we admitted only 34 students, while in the second semester, of about 49 applicants we were able to admit only six valedictorians or salutatorians and seven honor students from the different high schools.

"I have not been able to communicate with you earlier owing to many problems and handicaps in our work."

## Items of Human Interest

The two sons of Dean and Mrs. A. B. Lemon of the University of Buffalo have recently been discharged from service with the United States Navy. Edgar, the eldest son, is now vacationing with his wife, who is of Canadian birth, in Canada and the Buffalo area. James, the younger son, and his wife are now residing in Oakland, California. James, who served during the war as a hospital apprentice and pharmacist's mate, expects to begin the study of pharmacy in September.

Dean and Mrs. Charles H. Rogers and Dr. and Mrs. Charles V. Netz of the University of Minnesota and Dean Glenn L. Jenkins of Purdue University were among the honor guests at the annual banquet of the Twin City Retail Druggists Association in St. Paul, Minnesota, on January 30.

Jack F. Foul, who was a second year pharmacy student at the University of Pittsburgh when he went into the service, had the distinction of helping in the treatment of Premier General Tojo after his attempted suicide. Technician Foul, a member of the 637th Medical Detachment, is now stationed at Hanshu, Japan.

Dean and Mrs. G. E. Crossen, Oregon State College, have adopted a son, George William, age 12 months.

Lt. Col. Robert F. Blake and PFC Lynn S. Blake, Jr., sons of Dean Blake, have returned to Auburn as veterans of the European theater. Robert has returned to his former position as cashier of the Bank of Auburn. Lynne, Jr., is attending college this quarter in the School of Science and Literature. Dean Blake's daughter Kathryn, Mrs. R. H. Bjurberg, is also residing in Auburn. Her husband is an instructor in the department of history.

Mrs. Elizabeth G. Krusen, widow of former president Wilmer Krusen of the Philadelphia College of Pharmacy and Science, died on December 5 in Rochester, Minnesota, where she was under treatment at the Mayo Clinic. One of her sons is a member of the medical staff there. It was through her efforts that the Women's Club was founded which through her initiative and leadership the Club was able to supply much needed equipment and was able to purchase several adjacent properties for the future expansion of the college.

The twenty-fifth anniversary of the connection of Dr. B. Olive Cole, associate professor of economics and pharmaceutical law, with the School of Pharmacy of the University of Maryland, was celebrated at the alumni party at the Lord Baltimore Hotel, on November 8, 1945. Twenty-five American beauty roses, an engraved silver platter and silver hurricane candles were presented to Dr. Cole by the faculty and alumni of the school.

## New Books

**Howell's Textbook of Physiology**, edited by John F. Fulton, M. D., Professor of Physiology. Yale University. Fifteenth Edition, 1946. 1304 pages. Illustrated. W. B. Saunders Company, Philadelphia. Price \$8.00.

The fifteenth edition of Howell's Textbook of Physiology is a complete change over the preceding editions. The editor, Dr. John F. Fulton, has called upon numerous collaborators for contributions in their own particular specialties. As a result, the book is at present outstanding in its presentation of "up-to-date" material and the manner in which it is presented. For this reason it will be found a most desirable text for students of medicine and, perhaps, students of dentistry. The most noticeable change, however, is that it no longer follows the guiding principles of Dr. Howell—(1) simplicity and lucidity in the presentation of facts and theories and (2) judicious limitation of material selected. Hence, the book is not as "readable" to the undergraduate student as it has been previously and although it still serves as an excellent reference text its value as an undergraduate teaching text in physiology is diminished. Of course, such a condition is unavoidable when an author attempts to discuss the more technical aspects of his field.

D. M. Pace

**An Introduction of Materia Medica and Pharmacology** by Hugh Allister McGuigan, Ph. D., M. D., Professor Emeritus of Materia Medica, Pharmacology and Therapeutics, University of Illinois, College of Medicine, Chicago and Elsie E. Krug, B. S., R. N., Science Instructor, St. Mary's School of Nursing, Rochester, Minn. Fourth Edition. 1945. 556 pages. 37 illustrations, 26 color plates. C. V. Mosby Company. Price \$3.50.

A major aim of this well-known text-book for nurses has been to bring its contents into conformity with the U. S. P. XII; important non-official drugs of recent date have also been added. Advances made in medicinal treatment during the war are given prominence, as in the use of quinacrine and pamaquine in malaria, penicillin in infections and blood-plasma in burns and hemorrhages. Of course, other advances have been included as in case of newer vitamins and of hormone replacement therapy. To keep the book from becoming unduly large some chapters have been reorganized and shortened; others have been entirely revised. In the new edition only the English forms of the names of drugs are used; although the metric dosage is now given prominence, the apothecary is given in parentheses. Introductory chapters on pharmacy, methods of administration, actions of drugs, and common poisons and antidotes precede the various chapters of pharmacology and materia medica. Added value is given by a 15 page history of materia medica, a brief discussion of drug legislation, and a glossary of medical terms. The book is well illustrated with pictures dealing with methods of administration and other topics of special interest to nurses and contains a series of beautiful color plates of drug plants from Jackson's *Experimental Pharmacology and Materia Medica*.

H. G. O. Holck





# INSTITUTIONS HOLDING MEMBERSHIP IN THE AMERICAN ASSOCIATION OF COLLEGES OF PHARMACY

## New Jersey

Rutgers University, The State University of New Jersey, New Jersey College of Pharmacy, Newark (1923)  
Ernest Little, Dean

## New York

University of Buffalo, School of Pharmacy, Buffalo. (1939)  
A. B. Lemon, Dean  
Columbia University, College of Pharmacy of the City of New York. (1939)  
Charles W. Ballard, Dean  
Fordham University, College of Pharmacy, New York. (1939)  
Charles J. Deane, Acting Dean  
Long Island University, Brooklyn College of Pharmacy, Brooklyn. (1939)  
Hugo H. Schaefer, Dean  
Union University, Albany College of Pharmacy, Albany. (1945)  
Francis J. O'Brien, Dean

## North Carolina

University of North Carolina, School of Pharmacy, Chapel Hill. (1917)  
J. Grover Beard, Dean

## North Dakota

North Dakota Agricultural College, School of Pharmacy, Fargo. (1922)  
William F. Sudro, Dean

## Ohio

Ohio Northern University, College of Pharmacy, Ada. (1925)  
Rudolph H. Raabe, Dean  
The Ohio State University, College of Pharmacy, Columbus. (1900)  
Bernard V. Christensen, Dean  
University of Toledo, College of Pharmacy, Toledo. (1941)  
George L. Baker, Dean\*  
Bess G. Emch, Acting Dean  
Western Reserve University, School of Pharmacy, Cleveland. (1902)  
Arthur P. Wyss, Dean

## Oklahoma

University of Oklahoma, School of Pharmacy, Norman. (1905)  
David B. R. Johnson, Dean

## Oregon

Oregon State College, School of Pharmacy, Corvallis. (1915)  
George E. Crossen, Dean

## Pennsylvania

Duquesne University, School of Pharmacy, Pittsburgh. (1927)  
Hugh C. Muldoon, Dean  
Philadelphia College of Pharmacy and Science, Philadelphia. (1900)  
Ivor Griffith, Dean  
Temple University, School of Pharmacy, Philadelphia. (1928)  
H. Evert Kendig, Dean  
University of Pittsburgh, Pittsburgh College of Pharmacy, Pittsburgh. (1900)  
Edward C. Reif, Dean

\*On leave of absence.

## Philippines

University of the Philippines, College of Pharmacy, Manila. (1917)  
Patrocinio Valenzuela, Dean

## Puerto Rico

University of Puerto Rico, College of Pharmacy, Rio Piedras. (1926)  
Luis Torres-Diaz, Dean

## Rhode Island

Rhode Island College of Pharmacy and Allied Sciences, Providence. (1926)  
W. Henry Rivard, Dean

## South Carolina

Medical College of the State of South Carolina, Charleston. (1940)  
William A. Prout, Director  
University of South Carolina, School of Pharmacy, Columbia. (1928)  
Emery T. Motley, Dean

## South Dakota

South Dakota State College, Division of Pharmacy, Brookings. (1908)  
Floyd J. LeBlanc, Dean

## Tennessee

University of Tennessee, School of Pharmacy, Memphis. (1914)  
Robert L. Crowe, Dean

## Texas

University of Texas, College of Pharmacy, Austin. (1926)  
William F. Gidley, Dean

## Virginia

Medical College of Virginia, School of Pharmacy, Richmond. (1908)  
Wortley F. Rudd, Dean

## Washington

State College of Washington, School of Pharmacy, Pullman. (1912)  
Pearl H. Dirstine, Dean  
University of Washington, College of Pharmacy, Seattle. (1903)  
Forest J. Goodrich, Dean

## West Virginia

West Virginia University, College of Pharmacy, Morgantown. (1920)  
J. Lester Hayman, Dean

## Wisconsin

University of Wisconsin, School of Pharmacy, Madison. (1900)  
Arthur H. Uhl, Director

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## FELLOWSHIPS IN PHARMACY

To meet the demonstrated need for trained teachers and researchers in the field of pharmacy, the American Foundation for Pharmaceutical Education announces a limited number of Fellowships for students seeking graduate degrees in pharmaceutical subjects.

These Fellowships are open to students (men or women) qualified for registration in approved graduate schools (or colleges) for one or more of the following major fields:

**PHARMACY**  
**PHARMACEUTICAL CHEMISTRY**  
**PHARMACOLOGY**  
**PHARMACOGNOSY**  
**(or closely related subjects)**

Each Fellow will receive from the Foundation a stipend to cover the year of his appointment, plus an allowance for tuition and miscellaneous term bills. Fellowships are renewable for one year.

For further information concerning Foundation Fellowships, including application forms, write directly to the

**Board of Grants,**  
**AMERICAN FOUNDATION FOR PHARMACEUTICAL**  
**EDUCATION**

**330 West 42nd Street**

**New York 18, N. Y.**

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